DEFENSE INDUSTRY BULLETIN

Volume 1 No. 7

July 1965

DOCUMENTS DEPARTMENT
UNIVERSITY OF FLORIDA LIBRARIES
GAINESVILLE, FLORIDA

D1.3/2.1/7

IN THIS ISSUE

Project Management in the U.S. Navy 1
Mission SAFETY–70 3
Guidelines for Developing and Submitting Unsolicited Proposals—U.S. Air Force 4
Intelligence—Culture—Skill Our Main Reliance 6
Reliability Study Results Available to Industry and Research Organizations 13

DEPARTMENTS

About People 7
Meetings and Symposia 8
Calendar of Events 9
Speakers Calendar 10
Notes to Editors 12
From the Speakers Rostrum 15
Defense Procurement 22

DEPARTMENT OF DEFENSE

UNIVERSITY OF FLORIDA LIBRARIES
AUG 1965

UNIV. OF FLORIDA LIBS
DOCUMENTS DEPARTMENT
U.S. DEPOSITORY

Publication of
ASSISTANT SECRETARY OF DEFENSE-PUBLIC AFFAIRS

The Air Force Customer

"One important program objective of the United States Air Force in support of national policy is to 'exploit technology to maintain a distinct military advantage in aerospace power.' . . . We in the United States have no corner on technological breakthroughs and I don't have to emphasize to you the consequences of a potential enemy breakthrough that is not offset by a corresponding United States advance. To guard against such technological surprises as well as to provide the technology required to support our defense efforts, we must endeavor to maintain an aggressive research and technology program."

The foregoing is quoted from the presentation by Major General M. C. Demler, Commander, Research & Technology Division, Air Force Systems Command, at the recent DOD-NSIA Advanced Planning Briefings for Industry. Highlights from the Air Force addresses made at the briefings begin on page 15.

The Editors.

DEFENSE INDUSTRY
BULLETIN

Published by the Department of Defense
Hon. Robert S. McNamara
Secretary of Defense
Hon. Cyrus R. Vance
Deputy Secretary of Defense
Hon. Arthur Sylvester
Assistant Secretary of Defense (Public Affairs)
Col. J. B. Cross, USAF
Director for Community Relations
Col. Edwin C. Gibson, USA
Chief, Business & Labor Division
Lt. Col. Sheldon Hicks, USA
Chief, Business Branch and Editor-in-Chief

Editor........LCdr. E. W. Bradford, USN
Assoc. Editor..........Miss Cecilia Pollok
Assoc. Editor............Mr. Rick La Falce
Edtiorial Assistant
Norman E. Worra, JO1, USN

The *Defense Industry BULLETIN* is published monthly by the Business & Labor Division, Directorate for Community Relations, Office of the Assistant Secretary of Defense (Public Affairs). Use of funds for printing this publication was approved by the Director of the Bureau of the Budget.

The purpose of the *BULLETIN* is to serve as a means of communication between the Department of Defense (DOD) and its authorized agencies and defense contractors and other business interests. It will serve as a guide to industry concerning official policies, programs and projects, and will seek to stimulate thought by members of the defense-industry team in solving the problems that may arise in fulfilling the requirements of the DOD.

Material in the *BULLETIN* is selected to supply pertinent unclassified data of interest to the business community. Suggestions from industry representatives for topics to be covered in future issues should be forwarded to the Business & Labor Division.

The *BULLETIN* is distributed each month to the agencies of Department of Defense, Army, Navy, and Air Force, and to representatives of industry. Request for copies should be addressed to the Business & Labor Division, OASD/PA, Room 2E813, The Pentagon, Washington, D.C. 20301, telephone, OXford 5-2709.

Contents of the magazine may be reprinted freely without requesting permission. Mention of the source will be appreciated.

President Johnson Signs FY 1966 Procurement Authorization Bill

President Johnson has signed S. 800, an act to authorize appropriations during Fiscal Year 1966 for procurement of aircraft, missiles, naval vessels and research, development, test and evaluation (RDT&E) for the Armed Forces, and for other purposes. Following is a breakdown of the total authorization:

Procurement	Amount Authorized
Aircraft	$ 5,810,500,000
Missiles	1,426,800,000
Naval vessels	1,721,000,000
RDT&E	6,444,500,000
Total	$15,402,800,000

Five-Year Modernization Program Planned for WSMR

Modernization is an increasingly critical work at White Sands (N.M.) Missile Range (WSMR), the nation's largest all-land missile range, where approximately $10 million is allocated this year for new equipment, plus $5 million for research and development of instrumentation.

Advances in missile technology presenting a requirement for highly sophisticated tracking, reporting and control instrumentation have imposed upon White Sands the need for an estimated $50 to $75 million for modernization over a period of five years.

In seeking to meet the requirements of modern missile technology, officials at WSMR are taking a double-forked approach—contracting with industry to meet many of the requirements, but relying heavily on expanded in-house laboratory facilities. The in-house laboratories of WSMR simulate various electronic and radiation environments for testing purposes including structural experiments, quality control, vibration and other conditions.

An important part of the modernization effort is a new concept known as ARTRAC (Advanced Range Testing, Reporting Control). It calls for extremely accurate data very soon after testing is completed or concurrently with control of the missile.

"Real time data" is the term applied to the requirement for data essential to instantaneous action, i.e., to determine where a missile might impact if destroyed at a precise instant, or to send instructions to correct its course. ARTRAC involves split-second reporting of data and centralized control of operations.

Requirements for the five-year instrumentation modernization program now under way were studied by a special subpanel of the Army Scientific Advisory Panel during a visit to WSMR in September 1963.

When the proposed modernization program is completed, which is dependent upon continued funding at approximately the current level over a five-year period, WSMR is expected to be capable of measuring space position and velocity of test vehicles with an accuracy of plus or minus one foot and plus or minus of one per cent of velocity over the entire 4,000-square mile range.

Project Management in the U.S. Navy

by

Captain W. C. Moore, USN

On 2 December 1963, a 121-year old pattern of organization within the U. S. Navy came to an end. On that day, the three-star flag of Vice Admiral W. A. Schoech symbolically announced that a single Naval officer was, for the first time, responsible for the material support of the operating forces.

With the activation of the Naval Material Support Establishment (NMSE) under the Chief of Naval Material (CNM), the Navy initiated a series of important developments within the part of its organization responsible for the logistics support of the fleet and the Marine Corps. To understand these changes, and their implications, it is necessary to know something of the traditional organization which the NMSE supplanted.

Since 1842, the operating forces had relied on a number of separate bureaus to deliver the ships, weapons, equipment and personnel which, when properly assembled, embodied the fighting power of the Navy. Over the years, a large number of modifications and adjustments had been made in the organization of these bureaus.

In recent years these adjustments had been dictated mainly by the rising complexity of weaponry and the resulting necessity for advanced competence in technical and business management. These forces had brought about changes such as the amalgamation in 1959 of the Bureaus of Ordnance and Aeronautics into the Bureau of Naval Weapons, as well as many other organizational modifications, large and small.

By December of 1963 there were six bureaus; four "material bureaus" and two "people bureaus".

The Material Bureaus, and their basic responsibilities, were (and are):

The Bureau of Naval Weapons (BuWeps)—Responsible for the research, design, development, test, operating standards, manufacture, procurement and support of naval weapons.

The Bureau of Ships (BuShips)—Responsible for the research, design, development, procurement and construction of new naval vessels and the conversion, overhaul and repair of existing fleet vessels.

The Bureau of Supplies and Accounts (BuSanda)—Responsible for the administration of the Navy supply system and the supply support for projects, bureaus and offices, and Fleet commands.

The Bureau of Yards and Docks (BuDocks)—Responsible for the design, planning, development, construction, alteration and maintenance of facilities at shore facilities of the Naval Establishment.

Capt. Waller C. Moore, USN, is the Director of the Plans Division in the Office of the Chief of Naval Material. In this position he is a key figure in Navy's drive to exploit the project management technique in building new and vital warfare systems. His prior assignments included service as Director, Underwater Warfare Section, Bureau of Naval Weapons, and Commanding Officer of USS Currituck (AV-7) and USS Yorktown (CVS-10). Capt. Moore is a graduate of the U. S. Naval Academy.

The two remaining Bureaus, the "people bureaus" are the Bureau of Medicine and the Bureau of Personnel.

The practice of dividing support responsibilities between various bureaus worked reasonably well through the years, but after World War II it became increasingly apparent that few modern weapons and support systems fit into bureau-sized packages, and that coordination or cooperation by autonomous bureaus was not the answer to the Navy's most pressing material problems.

These problems had been critically examined by a special board, convened in 1962. This board subjected the inner workings of the Navy to a year of intensive study, and expressed its findings in a multi-volume report, titled: "Review of Management of the Department of the Navy."

Among the primary recommendations of the board was one which called for the existing Office of Naval Material (an office responsible for procurement policy) and the four material bureaus to be combined into an "NMSE". This organization was to be under the command of a single chief.

The fundamental reason for this change was to assign responsibility for support to one individual. But there were other important reasons as well. One of these was the fact that this new arrangement would provide a framework within which the Navy could employ *project management* on whatever scale efficiency and effectiveness required.

Of all the reasons for the establishment of a combined, integrated NMSE, under a single chief, the need for strengthened project management was one of the most compelling.

In the Navy concept of project management, the organizational pattern resembles a matrix. As shown on Chart 1, the bureaus can be thought of as the vertical elements of the matrix, and the project managers as the horizontal elements.

Together the bureaus and the project managers share the parcels of resources and know-how which are the substance from which the Navy creates and deploys new weapons systems. This chart shows that, where necessary, projects can cross bureau boundaries and, after proper coordination, utilize resources which are otherwise under bureau control.

Chart 2 shows the organization of the Naval Material Support Establishment. It indicates the relationship of the Chiefs of the Material Bureaus, and of the managers of major projects, to the Chief of Naval Material.

At present, the Navy has three categories of designated projects. These are:

(1) Projects designated by the Secretary of the Navy.
(2) Projects designated by the Chief of Naval Material.
(3) Projects designated by Bureau Chiefs.

The decision as to which authority—SecNav, CNM, or a Bureau Chief—designates a project depends on the importance of the project when judged against the following criteria:

(1) The project has a high national priority or an urgent military necessity.

(2) The project has top-level interest.

(3) The project comes with a sizeable price tag. The normal threshold for designation is $25 million of R&D costs, or an anticipated production cost of $100 million.

(4) The project is highly complex, either technically or organizationally. Most projects are challenging as engineering achievements. All major projects cross the organizational lines of the material bureaus and many involve close and long term cooperation with the operating forces of the Navy and Marine Corps or of other services.

(5) Other agencies of the Government, or other services, depend upon the Navy for successful development of the system.

(6) Such great advances in technology are necessary to assure success that unusually intensive management is appropriate.

(7) The project has high risk of major slippage or over-run if its management is not entrusted to a special organization.

Each designated project in the Navy operates under a charter. The charter is promulgated by the official who establishes the project. The charter specifically sets forth the name of the project manager, the items for which the project manager will be responsible, interface relationships (including those with the organizations which will provide logistical, operational testing and personnel training), communication channels to be followed and the location of the central project office. The project manager will have direct control of the allocation of all resources assigned to his project in the Five Year Force Structure and Financial Plan.

Ideally, the project manager or his key assistants will be associated with the project from its earliest stages. It is desirable for them to participate in the preparation of the Proposed Technical Approaches (PTAs) which outline possible characteristics of the yet-to-be-developed weapon system. Ordinarily, however, it appears that most project teams will be formed shortly before the project enters its Definition Phase.

The project manager for a designated project is selected on the basis of his ability as a technical and business manager. Most major projects are headed by flag officers.

At present, the Navy has a total of 22 designated projects. These are:

SECNAV Designated:
- Fleet Ballistic Missile Project.
- Surface Missile Systems Project.
- Project Scrap—Selective Curtailment of Reports and Paperwork. (This is an administrative, not a hardware, project. The project manager is the Inspector General of the Navy, and he reports to the Secretary of the Navy.)
- Anti-Submarine Warfare Systems Project (ASWS).

CNM Designated:
- F–111B Weapon System Project. This includes the Phoenix Missile System.
- Instrumentation Ships Project (ISPO).
- All-Weather Carrier Landing Systems Project (ACLS).
- Reconaissance, Electronic Warfare, Special Operations and Naval Intelligence Processing Systems (REWSON).
- Air Traffic Control Radar Beacon System and IFF Mark XII System (AIMS).
- OMEGA Navigation System (OMEGA).

AIMS and the ISPO are projectized partly because they have important intra-agency aspects. The Instrumentation Ships Project reflects Navy cooperation with the Air Force and NASA missile range and space instrumentation programs, and AIMS functions in coordination with the FAA, the Air Force and the Army.

Only two Bureau Chiefs, the Chiefs of the Bureau of Ships and the Bureau of Naval Weapons have so far chartered projects.

Bureau of Naval Weapons designated projects:
- E–2A Early Warning Aircraft.
- F–4 Phantom II fighter.
- A–6 Intruder attack aircraft.
- A–5 Vigilante attack aircraft.
- A–7 Corsair II attack aircraft.
- OV–10 (COIN) Counterinsurgency aircraft.
- DASH drone anti-submarine helicopter.
- Mark 44 Torpedo lightweight anti-submarine torpedo.
- Mark 46 Torpedo lightweight anti-submarine torpedo.
- Mark 48 Torpedo anti-submarine torpedo.

The Bureau of Ships designated projects are:
- Acoustic and Torpedo Countermeasure Systems Project (SUBAJAD).
- Satellite Communications Project (SATCOM).

An additional 40 to 50 weapon or support systems are under consideration for eventual designation, and perhaps six or eight of these may be chartered during the next few months.

During the year and a half since the Chief of Naval Material assumed command of the NMSE, the Office of the Chief of Naval Material (NAVMAT) has made excellent progress, despite limited staffing, toward the goal of exercising responsible—and responsive—control of the NMSE.

Under the command of Vice Admiral William A. Schoech the management philosophy of the OCNM was "Control,

(Continued on Page 11)

CHART 1

THE BUREAU/PROJECT MATRIX

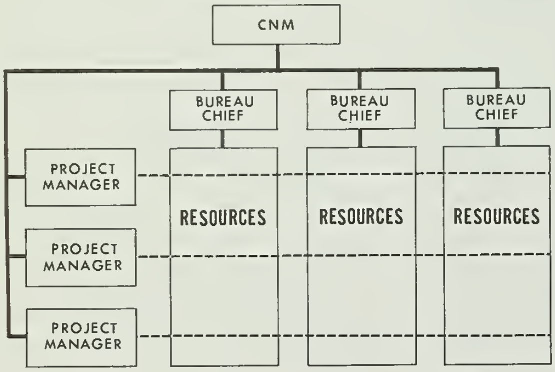
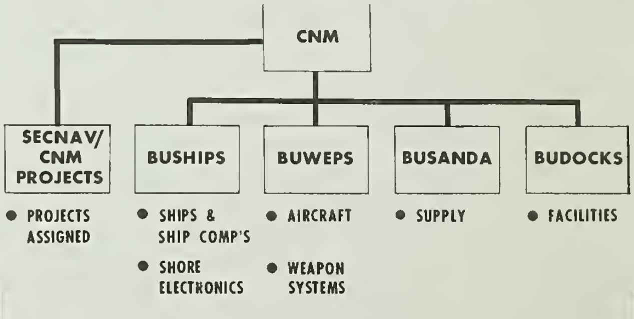


CHART 2

MAJOR NMSE LINE COMPONENTS



"Mission SAFETY-70"

War on Federal Work Injuries Kicked Off by President Johnson

> "The reduction of waste in manpower and materials is one of the principal managerial aims of the Administration.
>
> "As a first step in reducing these needless tragedies and this waste, I am launching Mission SAFETY-70.
>
> "Under this mission I am directing the Federal Departments and Agencies to reduce their injury frequency 30 per cent by 1970."
>
> Lyndon B. Johnson

Mission SAFETY-70, code name for a program that calls for reducing job injuries among Federal civilian employees 30 per cent by 1970, is part of a growing public concern over rising accident tolls. Industry safety plans are being studied by Government officials as part of the program.

President Johnson initiated the mission February 16, 1965. He described it as "a new, practical safety effort designed to reduce Federal work injuries and costs, year by year. . . ." In a Safety Policy for the Federal Service issued on the same day he requested the heads of all departments and agencies to review carefully and critically their safety policies and programs and revise them where necessary.

"Constant vigilance, effective action and sustained effort for improved performance are required," he said. The Federal Government will cooperate with state and local governments, industry and labor and safety organizations in developing and applying safety standards responsive to changing conditions and the pace of technological progress, the statement added.

In an effort to drive home the immensity of the accident problem, Government officials pointed out that in 1964 accidents of all kinds killed 104,000 persons in the United States and injured 50 million others. The cost to the nation was in excess of $15 billion. Accidents last year squandered about as much national income as a 3 per cent growth rate in economy produced. This is enough, Government sources say, to meet the entire cost of the War on Poverty and the programs under the Manpower Development and Training Act.

"Efforts planned to meet the objectives of Mission SAFETY-70," Secretary of Defense McNamara said, "include institution of improved accident reporting and follow-up procedures, extensive training of personnel in accident prevention techniques, safety engineering to prevent or correct hardware and maintenance deficiencies and continuing evaluation of compliance with safety requirements."

All elements of the Defense Department have responded to the SAFETY-70 memorandum. The Department of the Navy will use the program as the theme for its regularly scheduled East Coast and West Coast Regional Safety Conferences. Army has re-arranged its reporting format to relieve line personnel from accident analysis, assigning this function to full-time safety specialists. Among other steps taken by Air Force are plans for a ground safety program for the Air National Guard. To date there has been no formal ground safety program in that organization.

Other Defense agencies have acted to bring their present safety programs up to date. A common step is integrating headquarters programs with those of field activities.

Greater emphasis will be given to traffic safety. With more than a quarter-million Federal vehicles on the streets and highways in connection with official business, the Government contributes its share to the traffic problem and is determined to help solve that problem. Traffic experts say that improved driving performance by Government drivers could serve as a good example for other motorists.

SecDef Statement on Mission SAFETY–70

Successful execution of vital Defense Department missions rests with our more than 3.5 million employees, two-thirds of them in uniform. When any one of them is less than fully effective, our mission suffers a proportionate loss.

That, alone, is reason enough for vigorous support of the President's Mission SAFETY-70, a program to reduce the number of injuries among federal employees 30 per cent by 1970.

I have directed that such support be given throughout every command and agency. But success rests with the individual, in his own work and in his relationship with those around him. Only constant awareness of safety measures and vigilance in observing them can make a job safe.

I call on every Department employee to keep alert to his own safety—on the job, on the streets and highways and in his home—and to be alert always to the safety of others.

Robert S. McNamara

Guidelines for Developing and Submitting Unsolicited Proposals U. S. Air Force

In order to utilize to the fullest extent the vast supply of intellectual resources this country possesses, the Air Force Systems Command (AFSC) encourages any organization or individual outside the Air Force to suggest a research and development effort.

Voluntary proposals to perform research and development are distinguished from proposals which are requested by Air Force procurement activities from qualified sources. Voluntary proposals, if adopted, must be specially funded. Therefore, it is mandatory that the voluntary proposal be evaluated as offering significant advancement in the present state of the art before consideration for support by the U. S. Air Force can be given.

Advance Consultations.

It is the desire of the AFSC to give advance opinion on all proposed research and development efforts voluntarily suggested by organizations and individuals outside the Air Force. This opinion will provide the submitter guidance prior to the start of any extensive effort in the development of a detailed unsolicited proposal and is based on the assumption that there is a valid Air Force need for the suggested work. Prior personal contact with Air Force technical personnel, while not required, is permissible and encouraged.

Proprietary Rights and Information.

Unsolicited proposals do not necessarily contain proprietary information. They may be unique unto themselves, or may be no more than a restatement of existing Air Force requirements and as such should not be considered proprietary. Unsolicited proposals which truly contain proprietary data should have every paragraph which reveals proprietary data clearly marked "Proprietary Information Company-Confidential" at the beginning and end of each such paragraph.

When and How to Submit.

Research and development proposals may be submitted at any time. If an industrial organization feels it has an idea that is original in nature and concept and falls within the Air Force areas of interest, a preliminary proposal may be submitted without waiting to be asked.

While no rigid format is specified, elaborate brochures or presentations are definitely not desired. The best way to inform the AFSC agencies of proposed efforts, and to determine if they have a potential usefulness to the Air Force, is by letter. The ABC's of successful proposals are accuracy, brevity and clarity. It is extremely important that the letter be prepared with great care to encourage its reading, to facilitate its understanding and to impart an appreciation of the ideas desired to be conveyed. Specifically, the letter should include the following:

1. Name and address of the organization.
2. Type of organization (profit, non-profit).
3. Concise title and abstract of the proposed research.
4. An outline and discussion of the purpose of the research, the method of attack upon the problem and the nature of the expected results.
5. Name and research experience of principal investigator.
6. A suggestion as to the proposed starting and completion dates.
7. An outline of the proposed budget, including information on equipment, facility and personnel requirements.
8. Names of any other Federal agencies receiving the proposal. (This is extremely important.)
9. Brief description of the facilities, particularly those which would be used in the proposed research effort.
10. Brief outline of previous work and experience in the field.
11. If available, a descriptive brochure and financial statement.

AFSC Form 91 — Policy Agreement.

AFSC Form 91, entitled "Policy Agreement for Evaluation by the AFSC of Unsolicited Articles, Disclosures, Inventions and Voluntary Proposals for Contract," is a statement of the terms under which the AFSC will accept voluntary unsolicited proposals. This agreement must be signed by an officer of the company, or the individual owning the intellectual property contained in the voluntary proposal prior to evaluation. It is designed for the mutual protection of all concerned and provides protection based on proprietary claims made by submitters of voluntary proposals. No request for special exception or changes in the policy agreement will be granted. This agreement is to be executed only once (in duplicate) at the time of initial proposal submission. All subsequent proposal submissions will be covered by the executed policy agreement.

Evaluation.

AFSC agencies are responsible for acknowledging receipt of unsolicited proposals. Unsolicited proposals will be thoroughly and completely evaluated by appropriate personnel engaged in the technical areas of effort similar to the unsolicited proposal under consideration. Results of the evaluation will be furnished to the submitter.

Arranging a Contract.

The Air Force funds only those unsolicited proposals evaluated as offering significant advancement in the state of the art. If the unsolicited proposal is accepted, a contract may be negotiated between the organization and the appropriate AFSC activities. Contract details will be discussed and worked out between the submitter and the procurement activity of the AFSC activity concerned. In the event the proposal is not accepted, the Government is not obligated in any way to reimburse the submitter for any costs which may have been incurred in submitting the unsolicited proposal.

(See list of **AFSC Unsolicited Proposal Focal Points** on page 5.)

Air Force Systems Command
Unsolicited Proposal Focal Points

Hq., Air Force Systems Command Andrews AFB Washington, D. C. 20331 Base Number: (Area Code 301) 981 (plus extension)	Mr. William S. Catts Mr. Seymour Milnovsky Mail Office Symbol: SCKPP Ext. 6331 or 3288
Research and Technology Div. Bolling AFB Washington, D. C. 20332 Base Number: (Area Code 202) 562-9000	Miss A. Narkiewicz Mail Office Symbol: RTST Ext. 4417 or 4418
Air Force Materials Laboratory Wright-Patterson AFB, Ohio Base Number: (Area Code 513) 253-7111	Lt. R. Buchenauer Mail Office Symbol: MAP Ext. 36135
Air Force Flight Dynamics Laboratory Wright-Patterson AFB, Ohio Base Number: (Area Code 513) 253-7111	Mrs. Odebrecht Mail Office Symbol: FDE Ext. 23120
Air Force Avionics Laboratory Wright-Patterson AFB, Ohio Base Number: (Area Code 513) 253-7111	Mrs. E. Fox Mail Office Symbol: AVS Ext. 30126 or 39919
Air Force Aero Propulsion Laboratory Wright-Patterson AFB, Ohio Base Number: (Area Code 513) 253-7111	Mrs. R. B. Craig Mail Office Symbol: APP Ext. 21131
Systems Engineering Group Wright-Patterson AFB, Ohio Base Number: (Area Code 513) 253-7111	Maj. P. B. Fasules Mail Office Symbol: SER Ext. 27121 or 21113
Detachment #4 (Armament Eng. & Eval.) Eglin AFB, Fla. 32542 Base Number: (Area Code 305) 946-9680	Mr. A. J. Acree Mail Office Symbol: ATPO Ext. 673005
Air Force Weapons Laboratory Kirtland AFB, N. M. 87117 Base Number: (Area Code 505) 247-1711	Lt. P. Carpenter Mail Office Symbol: WLPC Ext. 3382
Air Force Rocket Propulsion Laboratory Edwards AFB, Calif. 93523 Base Number: (Area Code 805) 258-2111	Mr. D. E. Kistler Mail Office Symbol: RPPR Ext. 85371
Rome Air Development Center Griffiss AFB, N. Y. 13442 Base Number: (Area Code 315) 330-3200	Mr. R. Cain Mr. E. Lutwin Mail Office Symbol: EMPRP Ext. 71115
Aeronautical Systems Division Wright-Patterson AFB, Ohio Base Number: (Area Code 513) 253-7111	
Deputy for Advanced Systems Planning	Mr. W. R. Koch Mail Office Symbol: ASB-1 Ext. 20235
Deputy for Limited War	Lt. A. J. Kloven, Jr. Mail Office Symbol: ASJ Ext. 34103
Deputy for Reconnaissance	Mr. M. R. Mace Mail Office Symbol: ASRO Ext. 29247
Test Integration and Analysis Office	Mr. A. R. Hall Mail Office Symbol: ASTP Ext. 73232
Deputy for Subsystems and Equipment Engineering	Mr. I. S. Mayer Mail Office Symbol: ASWO Ext. 21120
Deputy for Systems Management	Mr. N. F. Schrein Mail Office Symbol: ASZXN Ext. 27246
Aerospace Medical Division Brooks AFB, Tex. 78235 Base Number: (Area Code 512) 532-8811	
6571st Aeromedical Research Laboratory Holloman AFB, N. M. 88330 Base Number: (Area Code 505) 473-6511	Dr. H. J. Von Beckh Mail Office Symbol: ARG Ext. 2453
6570th Personnel Research Laboratory Lackland AFB, Tex. 78236 Base Number: (Area Code 512) 674-1211	Dr. J. W. Bowles Mail Office Symbol: PRO Ext. 3375
USAF School of Aviation Medicine Brooks AFB, Tex. 78235 Base Number: (Area Code 512) 532-8811	Miss C. L. Reynolds Mail Office Symbol: SMOP Ext. 6258
USAF Epidemiological Laboratory Lackland AFB, Tex. 78236 Base Number: (Area Code 512) 674-1211	Lt. R. G. Welker Mail Office Symbol: EPA Ext. 3016
6570th Aerospace Medical Research Laboratory Wright-Patterson AFB, Ohio Base Number: (Area Code 513) 253-7111	Mr. E. E. Martin Mail Office Symbol: MRO Ext. 22214
Arctic Aeromedical Laboratory Fort Wainwright, Alaska Base Number: Fairbanks, Alaska 352-2100	Dr. H. F. Drury Mail Office Symbol: ALR
Wilford Hall USAF Hospital Lackland AFB, Tex. 78236 Base Number (Area Code 512) 674-3211	Maj. R. C. Wolff Mail Office Symbol: LMR Ext. 3228
Foreign Technology Division Wright-Patterson AFB, Ohio Base Number: (Area Code 513) 253-7111	Mrs. B. E. Lough Mrs. L. R. Connally Mail Office Symbol: TDKS Ext. 72232 or 74165
Ballistics Systems Division Norton AFB, Calif. 92409 Base Number: (Area Code 714) 889-4411	Maj. W. Gordon Mail Office Symbol: BSRAT Ext. 1517
Space Systems Division Air Force Unit Post Office Los Angeles, Calif. 90045 Base Number: (Area Code 213) 670-1444	Maj. D. E. Reinhardt Lt. S. G. Johnson Mail Office Symbol: SSTP Ext. 1766
Electronic Systems Division L. G. Hanscom Field, Mass. Base Number: (Area Code 617) 274-6100	Mr. M. V. Ratynski Mail Office Symbol: EST Ext. 3582
Air Force Eastern Test Range Patrick AFB, Fla. 32925 Base Number: (Area Code 305) 494 (plus extension)	Mr. E. C. Allmon Mail Office Symbol: ETES Ext. 6907 or 5588 Mr. George Gogel Mail Office Symbol: ETMKB Ext. 6151 or 7545
National Range Div. (Det. 1) Air Force Eastern Test Range Patrick AFB, Fla. 32925 Base Number: (Area Code 305) 494 (plus extension)	Capt. V. L. Kimler Mail Office Symbol: NRSPC Ext. 5547 or 5548
Air Force Missile Development Center Holloman AFB, N. M. 88330 Base Number: (Area Code 505) 473-6511	Mr. H. J. Schindler Mail Office Center: MDOPT Ext. 5618 or 35781
Air Force Missile Development Center, Det. 1, AF Avionics Laboratory Holloman AFB, N. M. 88330 Base Number: (Area Code 505) 473-6511	Mr. J. Frilick Mail Office Symbol: MDMKN-4 Ext. 4-7204
Air Force Flight Test Center Edwards AFB, Calif. 93523 Base Number: (Area Code 805) 258-2111	Lt. Col. W. D. Morrison Mail Office Symbol: FTOP Ext. 21461 or 37931
Air Proving Ground Center Eglin AFB, Fla. 32542 Base Number: (Area Code 305) 882-3731	Mr. W. C. Lazarus Mail Office Symbol: PGGT Ext. 3731
Air Force Special Weapons Center Kirtland AFB, N. M. 87117 Base Number: (Area Code 305) 247-1711	Maj. R. M. Dawson Mail Office Symbol: SWLPR Ext. 2572
Arnold Engineering Development Center Arnold AFS, Tenn. 37389 Base Number: (Area Code 615) 455-2611	Dr. H. K. Doetsch Mail Office Symbol: AER Ext. 252 or 7136

Intelligence--Culture--Skill
Our Main Reliance

by

RAdm. Russell Kefauver, USN

RAdm. Russell Kefauver, USN
Assistant Chief of Naval
Operations (Reserve)

Congressman (later President) James A. Garfield, in an 1878 address before the House of Representatives, stated the basic precept under which the nation's military forces were to be maintained in time of peace — a precept which has held true in principle down to the present day. "Though we will use the taxing power to maintain a small Army and Navy sufficient to keep alive the knowledge of war," he said, "yet the main reliance for our defense shall be the intelligence, culture and skill of our people."

International problems and military needs may change, but the philosophy remains the same: in time of national emergency, the nation must always rely upon (1) the ability of the business and industrial community to provide increased materiel support for our armed forces and (2) upon the trained and available manpower of the military Reserves which, since the beginnings of the republic, have provided the bulk of military forces in time of war.

Strong reserve forces, backing up the active forces, also provide a deterrent force-in-being. Trained and equipped, they can quickly be moved into action to call a bluff — as in the Berlin and Cuban Missile Crises in 1961 and 1962—or to fight a war, as in Korea. Today, for example, 126,000 Naval Reservists already carry their mobilization orders — orders to specific planned billets. These Reservists are available for activation on 24-hour notice.

This emergency manpower resource is the primary value of the nation's military Reserve forces. We can train and maintain about seven Reservists for the price of one man on active duty. But there are other benefits from the Reserve programs: members of Reserve forces are a firm group of patriotic citizens, interested in and informed about their Government, aware of their rights and responsibilities. Twice a citizen, they contribute to the national economy while working at their civilian occupations and, at the same time, they are trained and ready to protect those things which they produce.

Trained and ready. As an example of just how ready, we might cite the recent performance of the Naval Reserve Training Destroyer Escort BRANNON, based in Seattle, Wash. On January 31st of this year, BRANNON was called upon for emergency mission: the ship was under way within eight and a half hours. Some of the obstacles that were overcome included contacting the Reserve crew on a Sunday afternoon, buttoning up and testing a boiler which had been open for annual inspection and topping off fuel and provisions when support activities were observing holiday routine.

The training required to achieve such a smooth and coordinated operation does not come automatically with the taking of an oath. The knowledge required to operate and maintain our increasingly sophisticated military equipment is not gained through a cursory reading of instruction manuals. Military skills once obtained do not remain permanently imbued but must constantly be exercised. Training must be pursued, regularly and diligently.

An important part of this training — a part too frequently overlooked — is the cooperation that must be given by business and industry. Just as the nation as a whole depends upon the Reserve components of the armed forces for the additional strength necessary as a deterrent to war, or to fight and win an actual war, so do the Reserves depend upon the active peacetime support of business and industry to maintain that strength and readiness.

The primary ingredient of that support: a firm and meaningful employment policy that does not discriminate against, but encourages active participation in, Reserve training programs of all the armed services. It is not enough that the company president and senior officials have such a policy — it must extend down to the individual shop and office level in order to be effective. In too many companies, this is not the case. The Reserve components are necessary for our national survival; the bulk of the members of these Reserves must come from the business and industrial community. Membership in the Reserves is a source of justifiable pride for the employee who willingly gives his time and energies improving his ability to serve his country; and a source of pride for the employer who understands that, by encouraging membership in the Reserves, he, too, is contributing to national security. The employer also receives direct benefits in the form of the improved skills and broad experience gained by his employees during their Reserve training periods; skills and experience which are further enhanced by the intangible but vital practice of leadership exercised by Reservists at all levels of responsibility.

Intelligence, culture, skill. Our main reliance. Intelligence and culture may be passed on from one generation to another; but skill must always be learned. Business and industry is encouraged to insure that adequate time is made available for employees—at all levels—to participate in a Reserve program, and to take advantage of the training oportunities available. This is your insurance for the future—and for the future of our nation.

Naval Reserve Celebrates 50th Anniversary

The nation is currently observing the 50th Anniversary of the founding of the Naval Reserve, our first federally organized and controlled Reserve component. The motto for the 50th Anniversary observances is "Citizenship and Seamanship."

The Naval Reserve was established on March 3, 1915, to supplement the willing but uncoordinated State Naval Military; and, as a measure of its immediate worth, within two years of that date the fledgling Naval Reserve was called upon to provide almost 335,000 men — roughly two-thirds of all the men in the Navy — for service in World War I. The contribution in World War II was even more impressive: 87 per cent of the 3,400,000 Navy men in that war were Naval Reservists. Today, more than half a million American citizens are associated with the Naval Reserve.

ABOUT PEOPLE

DEPARTMENT OF DEFENSE

Charles W. Hinkle has been reassigned from Dir. for Security Review, Office of Asst. Secretary of Defense (Public Affairs), to serve as Executive Asst. to the Asst. Secretary of Defense (Public Affairs). **Willis D. Lawrence** has been named Acting Dir. for Security Review replacing Mr. Hinkle.

Capt. John B. McLendon, SC, USN, has become Dir. for Contract Administration, Office of Asst. Secretary of Defense (Installations & Logistics), replacing Col. Donald B. Sowle, USAF, who retired on June 15.

RAdm. John W. Bottoms, SC, USN, formerly Force Supply Officer on the Staff of Commander Service Force, Pacific Fleet, and Fleet Supply Officer on the Staff of the Commander-in-Chief, Pacific Fleet, became Executive Dir., Procurement & Production, DSA, on June 1. **Brig. Gen. William L. Hamrick,** USAF, formerly Dep. Commander, San Bernardino Air Materiel Area, assumed the position of Executive Dir., Technical & Logistics Services, DSA, effective July 15.

Col. William W. Snavely, USAF, previously Dep. Dir. of Production & Programming, Hq., USAF, has replaced **Brig. Gen. Robert H. McCutcheon,** USAF, as Dir. of Procurement Policy, Office of Asst. Secretary of Defense (Installations & Logistics).

Col. Ronald D. Bagley, USAF, Dir. of Freight Traffic. Military Traffic Management & Terminal Service (MTMTS), is being assigned to the post of Dep. Commander, Eastern Area Command, MTMTS.

Col. Felix J. Gerace, USA, has been assigned as Executive to the Asst. Secretary of Defense (Installations & Logistics). Prior to this assignment he was Commandant of the U. S. Army Logistics Center.

ARMY

Stephen Ailes resigned from the position of Secretary of the Army on July 1. **Stanley R. Resor,** who has been Under Secretary of the Army, has succeeded Mr. Ailes as Secretary of the Army.

David E. McGiffert, Asst. Secretary of Defense (Legislative Affairs), has been designated to replace Mr. Resor as Under Secretary of the Army.

W. Brewster Kopp became Asst. Secretary of the Army (Financial Management) on June 14. He replaced **Edmund T. Pratt, Jr.,** who has left Government service.

Col. Joseph P. Alexander, Jr., formerly Commanding Officer, Atlanta General Depot, is now Commandant of the U. S. Army Logistics Management Center. He succeeds Col. Felix J. Gerace.

Col. James H. Batte is the new Commanding Officer of the U. S. Army Edgewood Arsenal, Edgewood, Md., a military complex that embraces Ft. Detrick, Md., Rocky Mountain Arsenal, Colo., and Pine Bluff Arsenal, Ark.

Col. Frank Milner, formerly Chief of the Technical Liaison Office, Office of Chief of Engineers, has assumed command of the U. S. Army Engineer Research & Development Laboratories, Ft. Belvoir, Va.

NAVY

Kenneth E. BeLieu resigned from the position of Under Secretary of the Navy effective July 1.

Robert H. B. Baldwin, a partner in the investment firm of Morgan Stanley and consultant to the Secretary of the Navy, has been nominated to succeed Mr. BeLieu as Under Secretary of the Navy.

Lt. General Richard C. Mangrum became Asst. Commandant of the U.S. Marine Corps on July 1. Gen. Mangrum replaces **Lt. Gen. Charles H. Hayes** who is retiring from military service.

Capt. A. M. Bogarth relieved Capt. G. B. Lyon as Dir., Technical Training and Personnel Division, Bureau of Naval Weapons, effective June 21.

The following are new assignments in the Office of Naval Material: **RAdm. Jack J. Appleby,** Dep. Chief of Naval Material (Material & Facilities); **RAdm. F. L. Pinney,** Chief of Naval Development and Dep. Chief of Naval Material (Development); **Capt. N. J. Cummings,** Head, Procurement Assistance Branch; **Capt. E. O. Proctor,** Executive to Asst. Chief of Naval Material (Logistics Support); **Capt. S. P. Gartz,** Executive to Chief of Naval Development; and **Capt. F. C. Watson,** Asst. to the Project Manager, Antisubmarine Warfare Systems.

AIR FORCE

The following major commanders are retiring effective July 31: **Gen. Walter C. Sweeney, Jr.,** Commander, Tactical Air Command; **Gen. Mark E. Bradley,** Commander, Air Force Logistics Command; and **Lt. Gen. Ralph P. Swofford, Jr.,** Commander, Air University.

The President has nominated to the Senate the following officers for appointments and assignments as indicated:

To be promoted to general and reassigned: **Lt. Gen. Kenneth B. Hobson** from Vice Commander, Air Force Logistics Command, to Commander, Air Force Logistics Command; **Lt. Gen. Bruce K. Holloway** from Dep. Commander in Chief, U. S. Strike Command, to Commander in Chief, U. S. Air Forces in Europe.

To be promoted to lieutenant general and reassigned: **Maj. Gen. Albert P. Clark** from Commander, 313th Air Div., Pacific Air Forces, to Vice Commander, Tactical Air Command; **Maj. Gen. Lewis L. Mundell** from Dir. of Operations, Air Force Logistics Command, to Vice Commander, Air Force Logistics Command; **Maj. Gen. John W. Carpenter III** from Asst. Dep. Chief of Staff, Plans & Operations for Joint Chiefs of Staff Matters, Hq., USAF, to Commander, Air University; and **Maj. Gen. Joseph H. Moore** from Commander, 2nd Air Div., Pacific Air Forces, to Dep. Commander, Military Assistance Command, Vietnam for Air Operations, and Commander, 2nd Air Div., Pacific Air Forces.

The following reassignments have been announced with effective dates to be announced at a later date: **Lt. Gen. Charles B. Westover** from Vice Commander, Tactical Air Command, to Vice Commander, Air Defense Command; **Lt. Gen. Cecil H. Childre** from U. S. Representative, Central Treaty Organization, to Commander, Continental Air Command; and **Lt. Gen. Henry Viccellio** from Vice Commander, Air Defense Command, to Dep. Commander in Chief, U. S. Strike Command.

Brig. Gen. Maurice F. Casey, Dep. Dir. of Information, is being reassigned to Commander, 1501 Air Transport Wing, Travis AFB, Calif., effective August 16. His replacement will be **Brig. Gen. William C. Garland,** now Commander, 12 Strategic Aerospace Div., Davis-Monthan AFB, Ariz.

Brig. Gen. Joseph R. DeLuca, Dep. Commander, Ogden Air Materiel Area, will become Dep. Dir. of Supply, Air Force Logistics Command, on July 31. His replacement will be **Brig. Gen. Howard W. Moore,** Commander, 19 Air Div., Carswell AFB, Tex.

Maj. Gen. Frank E. Rouse, formerly Dir. of Logistics (J-4), U. S. European Command, has become Commander, San Antonio Air Materiel Area, Kelly AFB, Tex.

Maj. Gen. Otto J. Glasser, previously Vice Commander, Electronic Systems Div., AFSC, has been assigned as Dir. of Operational Requirements, Hq., USAF. His replacement as Vice Commander, Electronics Systems Div., is **Col. Daniel E. Riley.**

Brig. Gen. Horace D. Aynesworth, Commander, Tactical Air Reconnaissance Center, will become Dep. Dir. of Operations, Hq., USAF, on Aug. 16.

Effective Aug. 2, **Brig. Gen. Kyle L. Riddle** will assume command of the Tactical Air Reconnaissance Center, Shaw AFB, S. C.; **Maj. Gen. Walter B. Putnam** will assume command of the Tactical Air Warfare Center, Eglin AFB, Fla.

MEETINGS AND SYMPOSIA

AUGUST 1965

Sixth Biennial Gas Dynamics Symposium, Aug. 25-27, at Northwestern University, Evanston, Ill. Sponsors: Air Force Office of Scientific Research, Office of Naval Research, National Aeronautics and Space Administration, U. S. Army Office of Ordnance Research, Advanced Research Projects Agency and Northwestern University. Contact: Dr. D. G. Samaras (SREP), Air Force Office of Scientific Research, Tempo D, 4th St. and Independence Ave., S.W., Washington, D. C. 20333, telephone Oxford 6-3769 or Donald R. Mathis, Box CM, Duke Station, Durham, N. C., telephone (Area Code 919) 286-2285.

Conference on **Exploration of Mars and Venus**, dates undetermined, at Virginia Polytechnic Institute, Blacksburg, Va. Co-sponsors: National Aeronautics and Space Administration and Air Force Cambridge Research Laboratories. Contact: Dr. John W. Salisbury (CRFL), Air Force Cambridge Research Laboratories, L. G. Hanscom Field, Mass. 01731, telephone (Area Code 617), CR 4-6100, ext. 4624.

SEPTEMBER 1965

Twenty-third International Congress of Physiological Sciences, Sept. 1-9, at Tokyo, Japan. Sponsors: Air Force Office of Scientific Research, National Science Foundation, National Aeronautics and Space Administration, Atomic Energy Commission, National Institutes of Health, National Academy of Sciences-National Research Council and Federation of American Societies for Experimental Biology. Contact: Dr. H. E. Savely (SRL); Air Force Office of Scientific Research, Tempo D., 4th St. and Independence Ave., S.W., Washington, D. C. 20333, telephone OXford 6-4369.

American Physical Society Symposium (Fluid Dynamics Division), Sept. 2-4, at Honolulu, Hawaii. Cosponsors: Air Force Office of Scientific Research and American Physical Society (APS). Contact: Capt. L. P. Gregg, (SREM), Air Force Office of Scientific Research, Tempo D, 4th St. & Independence Ave., S. W., Washington, D. C. 20333, telephone OXford 6-4369.

Conference on **Comparative Neurophysiology**, Sept. 10-12, at Tokyo, Japan. Co-sponsors: Air Force Office of Scientific Research and Tokyo Medical and Dental University. Contact: Dr. H. E. Savely, (SRL), Air Force Office of Scientific Research, Tempo D, 4th St. & Independence Ave., S.W., Washington, D. C. 20333, telephone OXford 6-4369.

Symposium on **Structural Adhesives Bonding**, Sept. 14-16, at Stevens Institute of Technology, Hoboken, N. J. Contact: J. M. Bodnar, Chief Materials Research Branch, SMUPA-VD6, Picatinny Arsenal, Dover, N. J., telephone (Area Code 201) 328-3183.

AF Industry **Data Management** Symposium, Sept. 22-23, at International Hotel, Los Angeles, Calif. Sponsors: Ballistic Systems Division (SBAMA), DOD and Industry. Contact: Lt. Col. D. A. Cook (BSOM), Norton AFB, Calif., telephone (Area Code 714) 889-4411, ext. 8021.

Sixth Symposium on **Non-Destructive Testing**, Sept. 28-30, at Sheraton-Dayton Hotel, Dayton, Ohio. Sponsor: Air Force Materials Laboratory (AFSC). Contact: Mr. Rowand (MAG), Air Force Materials Laboratory, Wright-Patterson AFB, Ohio 45433, telephone (Area Code 513) 253-7111, ext. 40209.

Third Symposium on the **Plasma Sheath**, dates undetermined. at New England Life Hall, Boston, Mass. Sponsor: Air Force Cambridge Research Laboratories. Contact: Charles E. Ellis (CRDM), Air Force Cambridge Research Laboratories, L. G. Hanscom Field, Mass. 01731, telephone (Area Code 617), CRestview 4-6100, ext. 3707.

OCTOBER 1965

Ninth Annual **Organic Chemistry** Conference, Oct. 5-6, at Natick, Mass. Sponsor: U. S. Army Natick Laboratories. Contact: Dr. Louis Long, Jr. Asst. Head, Organic Chemistry Laboratory (PRD), U. S. Army Natick Laboratories, Kansas St., Natick, Mass.

J. M. Burgers' 70th Anniversary Symposium on the **Dynamics of Fluids and Plasmas**, Oct. 6-8, at the University of Maryland, College Park, Md. Sponsor: Air Force Office of Scientific Research. Contact: P. A. Thurston (SREM), Air Force Office of Scientific Research, Tempo D, 4th St. and Independence Ave., S.W., Washington, D. C., telephone (Area Code 202) OX 6-3443.

1965 Congress of the **International Federation for Documentation** (FID), Oct. 7-16, at Washington, D. C. Sponsors: Air Force Office of Scientific Research, Office of Naval Research, Army Research Office and National Science Foundation and Council on Library Resources. Contact: Rowena Swanson (SRIR), Air Force Office of Scientific Research, Tempo D, 4th St. and Independence Ave., S.W., Washington, D. C. 20333, telephone OXford 6-5374.

NOVEMBER 1965

V/STOL Symposium, Nov. 3-4, at Wright-Patterson AFB, Ohio. Sponsor: American Helicopter Society. Host: Aeronautics System Division, Research and Technology Division and Systems Engineering Group. Contact: Geo. Dausman, Wright-Patterson AFB, Ohio, telephone (Area Code 513) 253-7111, ext. 25104 or 23164.

Fourth **Hypervelocity Techniques** Symposium, Nov. 15-16, at Arnold Air Force Station, Tenn. Sponsors: Arnold Engineering Development Center, ARO, Inc., and Denver Research Institute. Contact: J. Lukasiewicz, Arnold Air Force Station, Tenn., telephone (Area Code 615) 455-2611, ext. 7204 or 7205.

Fourth Annual Symposium on **Physics of Failure in Electronics**, Nov. 16-18, at the Illinois Institute of Technology Research Institute. Cosponsors: Rome Air Development Center and the Illinois Institute of Technology Research Institute. Contact: Joseph Schramp (EMERP), Rome Air Development Center, Griffiss AFB, N. Y., telephone (Area Code 315) FF6-3200, ext. 2813.

DECEMBER 1965

International Symposium on **Differential Equations and Theory of Systems**, Dec. 27-30, at the University of Puerto Rico. Sponsors: Air Force Office of Scientific Research, Brown University and the University of Puerto Rico. Contact: Maj. B. R. Agins (SRMA), Air Force Office of Scientific Research, Tempo D, 4th St. and Independence Ave., S.W., Washington, D. C. 20333, telephone (Area Code 202) OXford 6-1302.

All meetings listed are Unclassified.

CALENDAR OF EVENTS

Aug. 24-27: Western Electronic Show and Conference, San Francisco, Calif.

Aug. 31-Sept. 2: Twelfth National Conference of the Armed Forces Management Assn., Washington-Hilton Hotel, Washington, D. C.

Sept. 2-4: Sixth Armored Div. reunion, Chicago, Ill.

Sept. 3-5: Twenty-Ninth Div. Assn. meeting, Akron, Ohio.

Sept. 3-6: Tenth Armored Div. Assn. meeting, New York, N. Y.

Sept. 4-6: Society of the Fifth Div. meeting, Washington, D.C.

Sept. 4-6: Century Assn. (100th Inf. Div.) meeting, Washington, D. C.

Sept. 9-12: Society of the First Div. meeting, Pike, N. H.

Sept. 10-12: Thirty-Fourth Infantry Div. Assn. meeting, Omaha, Neb.

Sept. 17-19: Eighty-Seventh Infantry Div. Assn. meeting, Dayton, Ohio.

Sept. 12-15: American Road Builders Assn. meeting, Kiamesha Lake, N. Y.

Sept. 12-17: American Chemical Assn. meeting, Atlantic City, N. J.

Sept. 13-16: Society of Auto Engineers meeting, Milwaukee, Wis.

Sept. 16-17: Mechanical Engineers Mfg. Conference, New York, N. Y.

Sept. 18-19: Wisconsin Aerospace Exposition, Milwaukee, Wis.

Sept. 19-22: American Institute of Chemical Engineers meeting, Rochester, N. Y.

Sept. 21-23: American Society of Industrial Security meeting, Atlanta, Ga.

Sept. 22-24: International Conference on Military Electronics, Washington, D. C.

Sept. 22-26: Twentieth Annual Convention of National Defense Transportation Assn., Detroit, Mich.

Sept. 26-29: National Defense Transportation Assn. meeting, Detroit, Mich.

Sept. 26-29: National Institute of Gov. Purchasing meeting, Washington, D. C.

Sept. 27-28: Mountain State's Governors Conference on Science and Technology, Denver, Colo.

Sept. 27-30: Iron and Steel Engineers Assn. meeting, Pittsburgh, Pa.

Sept. 28-Oct. 1: International Congress on Experimental Mechanics, Washington, D. C.

Oct. 1-9: Air Force Worldwide Fighter Interceptor Weapons Meet, Tyndall AFB, Fla.

Oct. 7: Twenty-Second annual National Security Industrial Assn. (NSIA) meeting and dinner, Washington, D. C.

Oct. 7: NSIA Maintenance Advisory Committee Annual Fall meeting, Washington, D. C.

Oct. 7: NSIA Procurement Advisory Committee Annual Fall meeting, Washington, D.C.

Oct. 18-20: Defense Supply Assn. Annual Convention, Statler Hilton Hotel, Washington, D. C.

Oct. 19-20: Systems Effectiveness Conference, Washington, D. C.

Oct. 27-29: NSIA Meeting, Air Force Eastern Test Range and Cape Kennedy, Patrick AFB, Fla.

Microelectronics Working Group Formed at ECOM

A new working group, known as the Integrated Electronics Division, has been established at the U. S. Army Electronics Command (ECOM), Fort Monmouth, N. J.

The new unit was organized to consolidate and broaden microelectronics research and development at the ECOM Electronics Laboratories.

The division was formed largely by regrouping work in semi-conductor integrated circuits carried on in the Solid State and Frequency Control Division, and work in thin films and assemblies formerly conducted in the Electronic Parts and Materials Division.

The Solid State and Frequency Control Division will continue to operate primarily in the areas of microwave transistors and diodes, lasers, parametric amplifiers, atomic clocks and quarts crystal devices.

The Electronic Parts and Materials Division will now be engaged primarily in passive microwave devices, computer components, materials, cables, nuclear radiation effects and electro-mechanical devices.

Dr. James D. Meindl and Robert A. Gerhold have been named acting director and deputy director, respectively, of the new group.

Dr. R. S. Wiseman Heads New ECOM Laboratory

Dr. Robert S. Wiseman has been named to head the new Combat Surveillance-Target Acquisition Laboratory of the U. S. Army Electronics Command at Fort Monmouth, N. J.

Combat surveillance and target acquisition are two of the major areas in which the Electronics Command is emphasizing a build-up of in-house research and development capabilities to meet new military requirements.

Creation of the new laboratory was a major step in this direction according to Major General Frank W. Moorman, Commanding General of Electronics Command. The laboratory employs about 250 persons and is recruiting additional professional personnel toward a level of nearly 300 employees.

Dr. Wiseman, a native of Robinson, Ill., comes to the laboratory from a post as Warfare Vision Division chief of the Army Engineer Research and Development Laboratories at Fort Belvoir, Va.

S	M	T	W	T	F	S
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31

JULY 1965

S	M	T	W	T	F	S
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31				

AUGUST 1965

S	M	T	W	T	F	S
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30		

SEPTEMBER 1965

SPEAKERS CALENDAR

OFFICE OF THE SECRETARY OF DEFENSE

Maj. Gen. J. B. Bestic, Dep. Dir. for National Military Command System, Defense Communications Agency, at Amateur Radio Relay League meeting, Denver, Colo., July 17.

Hon. Harold Brown, Dir., Defense Research and Engineering, at DOD Summer Students Seminar, Washington, D. C., Aug. 6.

Hon. Paul R. Ignatius, Asst. Secretary of Def. (Installations and Logistics), at American Bar Assn. meeting, Miami, Fla., Aug. 9.

ARMY

Maj. Gen. Winston P. Wilson, Chief, National Guard Bureau, participating as Military Grand Marshal in Aquatennial Parade, Minneapolis, Minn., July 17.

Brig. Gen. Walter E. Lotz, Jr., Dir. Army Research, at 1965 R&D Seminar, Fort Belvoir, Va., July 21.

Lt. Gen. Robert Hackett, Comptroller of the Army, at Army Comptrollership School, Syracuse University, Syracuse, N. Y., July 22.

Maj. Gen. William F. Cassidy, Chief of Engineers, at 1965 Research and Development Seminar, Fort Belvoir, Va., July 22.

Maj. Gen. Winston P. Wilson, Chief National Guard Bureau, at graduation exercises, California Military Academy, Camp San Luis Obispo, Calif., July 24.

Hon. William P. Durkee, Dir., Civil Defense, Office, Secretary of the Army, at Governor's Conference, Minneapolis, Minn., July 27.

Brig. Gen. Raymond B. Marlin, Dir. Plans and Programs, at 3252nd USAR R&D Unit Nuclear Science Seminar, Oak Ridge, Tenn., July 29.

Lt. Gen. W. H. S. Wright, Chief, Office of Reserve Components, at graduation exercises, New Jersey Military Academy, Sea Girt, N. J., Aug. 21.

NAVY

Gen. C. B. Cates, USMC (Ret.), at launching of USS TRIPOLI (LPH-10), Ingalls Shipbuilding Corp., Pascagoula, Miss., July 31.

VAdm. I. J. Galantin, Chief of Naval Material, at the Armed Forces Staff College, Norfolk, Va., Aug. 31.

AIR FORCE

Maj. Gen. B. I. Funk, Commander, Space Systems Div., AFSC, at Society of Photographic Instrumentation Engineers meeting, San Francisco, Calif., Aug. 16.

Maj. Gen. E. B. LeBailly, Dir. of Information, at American Legion Convention, Portland, Ore., Aug. 19-21 (appearance only).

Brig. Gen. R. F. Bromily, Asst. Dep. Chief of Staff, Materiel, Air Defense Command, at University of Colorado, Boulder, Colo., Aug. 21.

PDP Renamed; Seminars Scheduled To Explain Changes

The Department of Defense announced clarification of the policies for initiation of major engineering and operational systems development projects. This clarification is contained in a revision of DOD Directive 3200.9, which also renames the procedure for initiation of major projects. This procedure, previously called Project Definition Phase, has been renamed Contract Definition and the study period preceding Contract Definition has been identified as Concept Formulation. Other changes in the Directive include:

- Increased emphasis on the initiation of engineering development rather than initiation of Contract Definition.
- Clarification and simplification of procedures for initiation of engineering development.
- Clarification of the degree of technology advancement allowed in engineering development.

In order to provide a better understanding of these policies, the DOD, in cooperation with National Security Industrial Association (NSIA), Aerospace Industries Association (AIA) and Electronic Industries Association (EIA), is sponsoring a series of indoctrination seminars throughout the country this summer. These seminars, which will include both industry and DOD personnel, are scheduled as follows:

Top Management Indoctrinations (Three-Hour Sessions):

Washington, D. C., August 17-18, 1965.

Los Angeles, Calif., August 20, 1965.

Middle Management Orientations (Three-Hour Sessions):

Los Angeles, Calif., August 23-24, 1965.

San Francisco, Calif., August 26, 1965.

Washington, D. C., August 30-31 and September 1, 1965.

Fort Monmouth, N. J., September 2, 1965.

Boston, Mass., September 8, 1965.

Philadelphia, Pa., September 10, 1965.

Denver, Colo., September 13, 1965.

Dallas, Tex., September 15, 1965.

St. Louis, Mo., September 17, 1965.

Dayton, Ohio, September 20, 1965.

Detroit, Mich., September 22, 1965.

Huntsville, Ala., September 24, 1965.

Instructor Workshops (3 days each):

Washington, D. C., September 27-29, October 11-13, 1965.

Los Angeles, Calif., October 4-6, 1965.

Dr. J. Sterling Livingston, President of the Management Systems Corporation, and Mr. James W. Roach, Assistant Director for Engineering Management, Office of Director of Defense Research & Engineering, will head the Top Executive sessions. Middle Management and Instructor Workshop sessions will be led by other Management Systems Corporation and DOD representatives.

Arrangements for participation in these indoctrination sessions will be made for industry participants through the cooperating industrial associations and for DOD participants through the Military Departments. The industry focal point for the Indoctrination Program is Paul A. Newman of the Washington NSIA staff. At the conclusion of the indoctrination sessions, the materials used in these sessions will be made available to industry and DOD organizations for any further indoctrination they may wish to conduct.

Project Management—U.S. Navy

(Continued from Page 2)

don't operate." Vice Admiral I. J. "Pete" Galantin who assumed the duties of CNM following Admiral Schoech's retirement March 1, 1965, follows a similar policy.

Both admirals, as well as their principal assistants, are among the Navy's foremost "material managers." The present CNM, Admiral Galantin, assumed his duties after serving as Director of Special Projects. The Special Projects Office produced Polaris, the first and best known of the Navy's designated projects.

As Director of Special Projects, Admiral Galantin was one of the Navy's principal project managers. In speaking to a class of prospective project managers at the Defense Weapon Systems Management Center at Wright-Patterson Air Force Base, Ohio, on April 9, 1965, he said. "I want the Navy members of this class to understand that I recognize and have faced some of the problems that you, as project managers, will face. You will have a sympathetic boss."

The Navy is now activating projects at an unprecedented rate. To observers of organization and management trends within the military forces, the Navy's current shift toward project management is one of the most dynamic organizational trends of recent years.

What does the Navy's move to adopt project management on a large scale mean to members of industry? It means, primarily, that one person, the project manager. will have full management control over the evolution of each of the Navy's most significant weapons systems. This control will be unequivocal. The contractor, or prospective contractor, will know exactly who is responsible for—and fully capable of—controlling the management destiny of each new Navy weapon system. Each member of industry—and everybody else—will know exactly "who is in charge here."

The increasing emphasis on project management will also mean better utilization of financial resources, as well as better utilization of technical and scientific personnel. This will be advantageous to the taxpayer.

The present structure of the Naval Material Support Establishment is ideally suited to strengthen the effectiveness of project management. If the Navy reaches its goals for the future in this important area, the project management technique will produce completely supportable weapons systems, delivered on time and within the prescribed cost and performance limits.

The only objective of all this effort is to maintain and strengthen the operating forces upon which the defense of the nation depends.

Project Managers
Naval Material Support Establishment

PROJECT	MANAGER
Fleet Ballistic Missile System (PM-1)	RAdm. Levering Smith Rm. 3004, Munitions Building (Area Code 202) OXford 61562
F-111B/Phoenix (PM-2)	RAdm. W. E. Sweeney Rm. 2243, Munitions Building (Area Code 202) OXford 67770
Surface Missile Systems (PM-3)	RAdm. E. T. Reich Rm. 3416, Munitions Building (Area Code 202) OXford 62661
Anti-Submarine Warfare Systems (PM-4)	RAdm. C. A. Karaberis Rm. 2034, Munitions Building (Area Code 202) OXford 63231
Instrumentation Ships (PM-5)	Capt. A. F. Hancock Rm. 4013, Main Navy Building (Area Code 202) OXford 64688
All-Weather Carrier Landing System (PM-6)	Capt. F. R. Fearnow Rm. 1904, Main Navy Building (Area Code 202) OXford 66618
REWSON (PM-7)	Cdr. D. G. Wilson Rm. 3824, Main Navy Building (Area Code 202) OXford 67498
AIMS (PM-8)	Capt. N. D. Champlin Rm. 4707, Munitions Building (Area Code 202) OXford 68856
OMEGA (PM-9)	Cdr. M. X. Polk Rm. 2512, Main Navy Building (Area Code 202) OXford 62422
E-2A	Mr. E. J. Raymond Rm. 3811, Munitions Building (Area Code 202) OXford 65695
F-4	Capt. C. C. Sanders Rm. 3712, Main Navy Building (Area Code 202) OXford 64657
A-6	Lt. Col. E. H. Finlayson Rm. 3077, Main Navy Building (Area Code 202) OXford 65003
A–5	Cdr. L. B. Hoop Rm. 3076, Main Navy Building (Area Code 202) OXford 63018
A-7	Capt. C. M. Cruse Rm. 3815, Main Navy Building (Area Code 202) OXford 65431
OV-10	Capt. J. L. Coleman Rm. 2W47, W Building (Area Code 202) OXford 67610
DASH	Cdr. R. G. Mellin Rm. 3063, Main Navy Building (Area Code 202) OXford 64408
Mark 44 Torpedo	Cdr. D. A. MacGillivray Rm. 3069, Main Navy Building (Area Code 202) OXford 63704
Mark 46 Torpedo	Capt. M. W. Whitaker Rm. 3066, Main Navy Building (Area Code 202) OXford 61704
Mark 48 Torpedo	Capt. D. B. Maher Rm. 3067, Main Navy Building (Area Code 202) OXford 62929
SUBAJAD	Cdr. W. H. Williams Rm. 1427, Main Navy Building (Area Code 202) OXford 64339
SATCOM	Mr. L. E. Johnson Bailey's Cross Roads, Va. (Area Code 202) OXford 44413 Extension 67

Munitions Building, 19th & Constitution Ave., Wash., D. C.
Main Navy Building, 18th & Constitution Ave., Wash., D. C.

Value Engineering Specialists To be Added to DOD

Secretary of Defense Robert S. McNamara has approved the addition of 265 Value Engineering Specialists to the Military Departments and the Defense Supply Agency in an attempt to curb unnecessary DOD spending.

The personnel increase, which will include 247 civilian and 18 military personnel and an additional Value Engineering specialist to be employed by the Office of the Secretary of Defense, was recommended by a Value Engineering Evaluation Group.

Composed of representatives from the Military Departments and the Defense Supply Agency, the evaluation group made its recommendations after completing a study of where value engineering personnel could most productively be assigned and what savings could be achieved by them.

The group will continue to meet periodically to provide overall direction to the recruitment, training and assignment of personnel and to monitor the results achieved from this personnel augmentation.

It is estimated that the move to hire additional specialists will result in a savings of at least $500 million in value engineering by FY 67.

The value engineering study was requested last February by Secretary McNamara who feels that one of the most obvious and continuous sources of savings in Defense procurement lies in constantly challenging design specifications to make certain that DOD is buying only what is needed.

Changes in specification resulting from DOD's program of Value Engineering — often referred to as the elimination of gold plating — produced savings totaling more than $250 million in FY 64.

NOTES FOR EDITORS

Briefed below are some events and projects within the Department of Defense which may be of interest to writers and editors. If further information on any of these topics is desired, please write to Chief, Magazine and Book Branch, Office of the Assistant Secretary of Defense, Public Affairs, Washington, D. C. 20301.

NEW SYSTEMS, EQUIPMENT JOIN ARMY INVENTORY

Several new systems and pieces of equipment have joined the Army in the past few weeeks. FIELD AUTOCLAVE — A portable autoclave, or sterilizer, has been designed specifically for the Special Forces. It is capable of steam sterilizing surgical dressing and instruments at 250° using any external heat source. NO SWITCHBOARDS—Pushbutton wireless telephones may soon be developed by Martin Company using touch-tone handsets to automatically select available frequencies and then broadcast the "electronic address" of the person being called. BULLDOZER — A bulldozer with a Sunday punch departs from the usual method of forcing its big blade across the ground; this bulldozer will use specially designed hydraulic pistons to slam the blade ahead. Called "impact assist," the system will permit a greater work load by a lighter tractor.

AIR FORCE THUNDERSTORM RESEARCH

The U. S. Air Force has completed a joint five-year research project with the U. S. Weather Bureau, the Federal Aviation Agency, the U. S. Navy and the U. S. Army, designed to advance the technology of meteorology, weather forecasting, storm control and aircraft structural design criteria.

The accomplishments are many but one example is project Rough Rider and the case of Captain Joe G. Kondracki, USAF.

On May 5, 1962, Capt. Kondracki, assigned as an experimental flight test officer at Wright-Patterson AFB, Ohio, began a series of test flights to gather data on thunderstorms. He successfully completed 41 penetrations, accumulating 169 minutes of flight, in the most severe areas inside the storm concentrations. During a penetration mission flown May 20, 1962, the turbulence was so severe that the entire pilot head was torn from the nose boom of the F100F causing loss of airspeed and altitude instrument information. At the same time, the engine experienced a series of compressor stalls as the aircraft encountered virtually a wall of water.

In spite of these adverse conditions, Capt. Kondracki continued flying the aircraft through the main cell of the storm for a distance of some 135 nautical miles allowing the observer in the rear seat to operate the test instruments.

USAF AIR TRAFFIC CONTROLLERS SAVE 1,745 AIRCRAFT

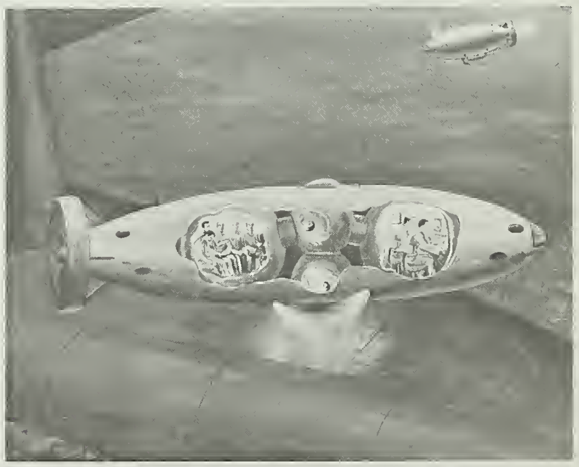
USAF Air Traffic Controllers (includes radar) saved 113 aircraft with 371 persons aboard during 1964. Aircraft involved were valued at $89,800,000. These were both military and civilian aircraft involved in emergencies that could have resulted in loss or damage, fatalities or injuries to people. A save is determined by a board of senior aircraft controllers who apply very critical criteria. A save is credited only when the actions were positively instrumental in aircraft recovery. In the nine years since January 1956 USAF air traffic controllers have saved 1,745 aircraft carrying 2,260 people and valued at more than $970,000,000.

MARINE CORPS HALVES PHYSICAL FITNESS TRAINING — SAME RESULTS

A new circuit training procedure at Parris Island has proved that Marines can achieve the same level of physical fitness in 13½ hours of training as they can in 31 hours under the present conventional system. The concept is an adaptation of British and Belgian methods which have become highly popular in the United States. The circuit training revolves around a track with 12 stations, each of which develops different muscles in the body. General Wallace M. Greene, Commandant of the Marine Corps, has expressed satisfaction with the new training method and has directed other units to begin using it.

SUBMARINE RESCUE VESSEL

Initial design and development of a submarine rescue vessel to be operational early in the 1970's has been started by the Navy. The craft will be 40 feet long and 8 feet in diameter. The rescue craft, capable of reaching any depth, will mate with the escape hatch of the downed submarine forming an air-tight seal. Survivors — 13 to 14 per trip — enter the small center sphere of the "triple-bubble" pressure hull. The triple-bubble design has optimum mating bell location, requires no disassembly for air transportation and provides a desirable internal arrangement for operators and rescuees. Management of the submarine rescue program is under the cognizance of the Navy's Special Projects Office.



Trapped crewmembers are retrieved from a disabled submarine in this artist's concept of the Navy's new rescue vessel. (See Last Item Above)

Reliability Study Results Available To Industry & Research Organizations

Plans have been announced by the U. S. Army to distribute unclassified results to all interested industrial and educational research organizations of a study begun last year to determine the reliability of material.

The study, being conducted under contract to the University of Michigan, is sponsored by the U. S. Army Research Office with the aim of establishing a Scientific and Technological Applications Forecast (STAF) on materiel failures. Inquiries concerning the project should be addressed to the Chief of Research and Development, Attn: Research Plans Office, Hq. Department of the Army, Washington, D. C. 20310.

Included in the STAF will be a published summary of major areas of interest to military research and development organizations, industry, universities and other groups concerned with military materiel requirements.

Areas to be covered include a forecast of the state of the art over the next 20 years and a research plan suggesting how identified gaps in the state of the art may be filled. Also included in the study will be a matrix section reflecting the scientific and engineering interdisciplinary relationships and reactions of some 17 life-cycle program milestones and five major categories of scientific and engineering considerations and personnel engaged in reliability research activities.

Colonel Raymond S. Isenson, Chief of the Army Research Office, stated that the project was begun after a review and sampling of reliability activities in the research, development and production areas of various organizations during the past three years.

Although much reliability oriented research has been accomplished since World War II, Colonel Isenson feels that there is an urgent need to compare the results of these research efforts to identify those which are getting too much attention as well as those which may be lacking support.

The mechanical reliability area is being particularly emphasized since reliability activities in the electronic field have received significant attention and financial support from military establishments during the past few years. Colonel Isenson went on to state that the current administrative efforts to reduce costs and to obtain the optimum return on basic and exploratory research dollars not only justified but made the STAF essential to increase the effectiveness of research planning.

Technical representative for the contracting office is Sumner Meiselman of the Advanced Technology Branch, Research Plans Office. Dr. Charles Lipson of the Mechanical Engineering Department, University of Michigan, has been assigned as project director.

Colonel Isenson indicates that work is proceeding on schedule. Accomplishments to date include the review of 4,000 classified and 10,000 unclassified abstract reports from the Defense Documentation Center. This includes all the reports relating to reliability furnished to the center by various activities sponsored by the Army, Navy and Air Force.

In addition, some 1800 National Aeronautics and Space Administration abstracts and technical reviews, prepared by the Research Triangle Institute concerning reliability oriented papers published in professional and trade journals, have been analyzed. An unspecified number of complete papers and texts are being scrutinized as part of the input to the state of the art analysis. However, this effort is not considered or required to be an exhaustive analysis, but rather a sufficiently comprehensive one to identify and establish the state of the art on reliability.

One of the most difficult aspects of this Scientific and Technological Applications Forecast is identifying and establishing the relationship of the vast number of scientific and engineering factors directly affecting the reliability of materiel. For example, one readily recognizes that the selection of materiel is an important consideration, but other equal though less familiar factors include environmental conditions, physical and mechanical loading techniques, human factors and evaluation methods, all interacting to affect materiel reliability. The problem becomes more complex when it is observed that these interactions do not have a fixed or constant relationship but vary as the materiel system progresses through its life cycle from concept through development, production and use phases; or, in the jargon of reliability, the specification, prediction, verification and preservation phases. As a result of the managerial team effort, Dr. Lipson's assistants have tentatively identified approximately 200 interacting groups of matrix elements which are further subdivided. These major groupings do not include the 76 environmental factors which have also been identified as causing damage to materiel and which incidentally are not generally specified in system development contracts. These environment factors will be discussed in the STAF.

Colonel Isenson stated that the managerial team expected that certain elements of the scientific and technological forecast, such as the selected directory and bibliographical sections, would be of value to industry and Government organizations. In view of this, the University of Michigan will solicit the assistance and cooperation of many industrial organizations and professional and technical groups for source information. For example, it is well-known that the Society of Automotive Engineers, the Society of Mechanical Engineers, the Aerospace Industries Association and others have ad hoc and standing committees engaged in reliability efforts. Yet much of this information is not known or readily available to personnel who are actively engaged in work which can or should advantageously use the knowledge and/or engage the services of these groups. One of the motives of the STAF is to open channels of communications among personnel working toward the common goal of known reliability of materiel.

Another important section of the STAF will be the identification of basic and applied research methods needed to fill voids in the total reliability effort. This identification will enable organizations to channel research support to the needed areas rather than duplicate efforts already accomplished.

NSIA Establishes Ocean Science & Technology Committee

The Executive Committee of the National Security Industrial Association has authorized the establishment of an Ocean Science and Technology Advisory Committee.

The mission of the committee will be to coordinate the complex interrelationship between anti-submarine warfare and oceanography. Interests of the committee will include ocean engineering, ocean technology and the ocean's effect on the military and economic security of the United States.

The new organization will serve the needs of many corporations involved in oceanography even though they are not concerned directly with the military application of the science.

Liaison has already been established with the Interagency Committee on Oceanography, the Assistant Secretary of the Navy for Research and Development and the Oceanographer of the Navy.

DOD Report on Small Business Procurement During July 1964-April 1965

Small business firms received $4,052 million in defense prime contract awards during July 1964-April 1965, an increase of $352 million over the amount received during the same 10 months of the previous fiscal year.

As can be seen in the table below, small business received 20.2 per cent from July 1964-April 1965, compared to 17.3 per cent for the same months of the previous fiscal year.

To insure that small firms would receive a fair share of defense work, $1,258 million in contracts were set aside during this same period for competition among small concerns only. Large firms were not permitted to bid on this work.

Small Business Report Merges With D.I.B.

Beginning with this issue, the *Defense Industry Bulletin* will provide the coverage of small business and economic utilization (labor surplus) policy formerly furnished by the *Small Business Report*, a quarterly publication of the Office of the Assistant Secretary of Defense (Installations & Logistics).

The Bulletin welcomes this merger as a step in better meeting the interests of the entire industrial community, including both large and small business, subcontractors as well as prime contractors. Since most sizeable defense contracts involve numerous interactions and interrelationships among a variety of contractors, the merger is a step which, it is hoped, will increase understanding and cooperation between every member of the defense industry team. Additionally, the savings to the Government, which consolidation of the two publications makes possible, contributes in some small part to the common goal of achieving a dollars worth of defense for every dollar spent.

Subscribers of the *Small Business Report* have been included on the *Defense Industry Bulletin* mailing list.

The Editors.

Maine Industries Product Show Scheduled

The Department of Defense will conduct a procurement counseling and assistance program during the Maine Industries Products Show to be held at Bangor, Maine, Aug. 24-27.

DOD's participation in the show is the result of an invitation extended by Governor John H. Reed of Maine.

Small business and labor surplus area specialists from the military services will be on hand to offer individual counseling and assistance to people interested in defense prime and sub-contracting opportunities.

Current invitations for bids and requests for proposals will be available in addition to lists of items for which military buyers are seeking additional suppliers.

SMALL BUSINESS SHARE OF DEFENSE PROCUREMENT

(Amounts in Thousands)

Type of Firm and Category of Procurement	Fiscal Year to Date 1965 Jul 64-Apr 65	Fiscal Year to Date 1964 Jul 63-Apr 64
DEFENSE PROCUREMENT (PRIME CONTRACTS) FROM ALL BUSINESS FIRMS	$20,020,718	$21,334,065
Missile & Space Systems	3,571,502	4,629,294
Other Major Hard Goods	8,768,501	9,346,339
Services	1,255,295	1,247,272
Commercial Items: Construction & all Purchases under $10,000	5,667,534	5,496,953
Civil Functions	757,886	614,207
DEFENSE PRIME CONTRACTS TO SMALL BUSINESS FIRMS	4,052,136	3,699,821
Missile & Space Systems	49,332	70,982
Other Major Hard Goods	725,200	614,167
Services	267,881	324,314
Commercial Items, Construction & all Purchases under $10,000	2,690,977	2,420,420
Civil Functions	318,746	269,938
PERCENTAGE OF DEFENSE PRIME CONTRACTS TO SMALL BUSINESS FIRMS	20.2%	17.3%
Missile & Space Systems	1.4	1.5
Other Major Hard Goods	8.3	6.6
Services	21.3	26.0
Commercial Items, Construction & all Purchases under $10,000	47.5	44.0
Civil Functions	42.1	43.9

FROM THE SPEAKERS ROSTRUM

U. S. Air Force Highlights DOD/NSIA Advanced Planning Briefings

This month's "From The Speakers Rostrum" presents excerpts from the Air Force addresses given at the regional DOD-NSIA Advanced Planning Briefings for Industry held during March and April in Los Angeles, New York City, Chicago, Dallas and Washington, D. C.

U. S. Air Force Advanced Planning Requirements

Lt. Gen. W. A. Davis, USAF
Vice Commander
Air Force Systems Command

Air Force Systems Command

Let us start with a brief look at the wide-ranging Air Force operational responsibilities.

First, the Strategic Air Command has responsibility for the bulk of the nation's strategic strength — for delivering on target from 80 to 90 per cent of the nation's nuclear power. This requires a balanced mix of aircraft and missiles. . . .

Second, the Tactical Air Command has responsibility for combat-ready forces capable of conducting world-wide tactical air operations for the United States Strike Command. . . .

Third, the Air Defense Command is our nation's air component of the joint U. S.-Canadian North American Air Defense Command. It has a vital role in the detection, identification, interception and destruction of hostile manned bombers in the event of attack on the North American Continent. . . .

Fourth, the Military Air Transport Service has the Department of Defense responsibility for global airlift and the Air Force responsibility for air rescue, air weather and air photographic and geodetic services. . . .

The total Air Force budget for FY 66 is $18.9 billion. The Air Force Systems Command (AFSC) has responsibility for approximately 30 per cent of the Air Force budget or about $5.4 billion. We administer more than 40,000 active contracts with a face value of approximately $50 billion and with a current unliquidated balance of over $5 billion. We have contracts with more than 5,000 different contractors.

The task of the Air Force Systems Command is to provide qualitatively superior systems for the Air Force. In order to perform this mission, we must advance aerospace technology as rapidly as is practical and adapt it on a timely basis to the needs of our aerospace systems.

AFSC Organization.

Now let us look at how we are set up to perform our mission and how the budget is broken down within Systems Command. The division and centers fall into five major areas of concern — threat, technological base, product, support and test.

First, we must assess the threat. This is the task of the Foreign Technology Division (FTD) which acquires, analyzes and disseminates foreign scientific and technical information to assess its value for possible application in the development of the Air Force weapon systems.

The FTD budget for FY 65 was over $27 million and is over $25 million for FY 66.

Second, we must advance our technological base. This is the aim of the laboratories of the Research and Technology Division (RTD) and the Aerospace Medical Division (AMD).

The Research and Technology Division is responsible for maintenance of a broad base of exploratory and advanced technology programs to aid in timely development of aerospace systems. It has seven laboratories.

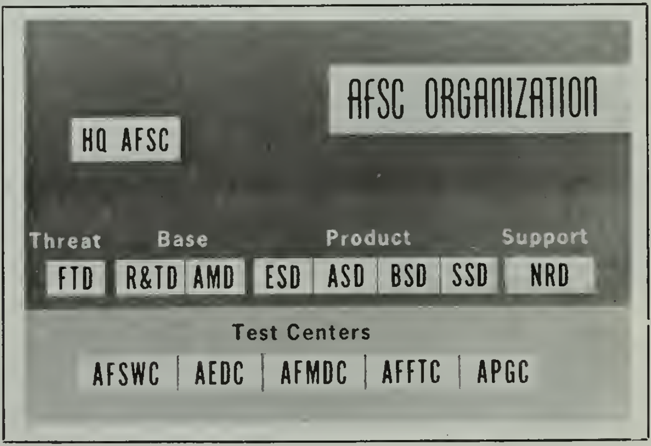
The budget for the Research and Technology Division was over $497 million for FY 65 and is over $565 million for FY 66.

The Office of Aerospace Research (OAR), which is not a part of Systems Command, has responsibility for basic research. The OAR programs provide necessary technology input to the technology programs of RTD.

The Aerospace Medical Division conducts bioastronautics research and development in support of aerospace programs, the USAF personnel system, clinical and aerospace medicine, and provides specialized educational programs in aerospace medicine.

The AMD budget for FY 65 was over $38 million and for FY 66 is over $37 million.

Third, we have to develop and acquire new systems for the Air Force — this is the task of the four product divisions, the Electronic Systems Division, the Aeronautical Systems Division, the Ballistic Systems Division and the



Space Systems Division. I will cover them in more detail in just a moment.

Fourth, our national ranges provide obviously essential support to our ballistic and space systems programs. The National Range Division (NRD), which is our newest division, plans, operates and maintains assigned range facilities in support of national ballistic missile and space programs. . . .

The NRD budget for FY 65 was over $197 million and for FY 66 is almost $225 million.

Within Systems Command the four product divisions are responsible for the bulk of our budget. They are also the divisions that you, as contractors, naturally have primary interest in.

The Electronic Systems Division (ESD) is responsible for development, acquisition and delivery of electronic systems and equipment for command and control of aerospace forces. This includes ground-based warning, aerospace support systems, satellite tracking and ground assessment of objects in space.

The ESD budget for FY 66 is over $314 million as compared with $394 million for FY 65.

The Aeronautical Systems Division (ASD) is responsible for development, acquisition and delivery of all aircraft, nonballistic missiles and related equipment. This division also conducts programs in the fields of limited war, counterinsurgency and reconnaissance. . . .

The ASD budget for FY 66 is almost $2.4 billion, which compares to $2.6 billion for FY 65.

The Ballistic Systems Division (BSD) manages Air Force ballistic missile acquisition programs and DOD programs for Advanced Ballistic Re-Entry Systems. Responsibilities begin with system concepts and include development, production, delivery of operational systems and site activations. . . .

The BSD budget for FY 65 was $1.5 billion and is $1 billion for FY 66.

The Space Systems Division (SSD) is responsible for development, acquisition and launch of space vehicles and research satellites. These responsibilities include launch support and on-orbit control.

The SSD budget for FY 66 is $469 million which is an increase over the FY 65 figure of about $451 million.

Research & Technology Division
Air Force Systems Command

Maj. Gen. M. C. Demler, USAF
Commander
Research & Technology Div.
Air Force Systems Command

Let us begin with the Air Force Research Program. This basic research generates much of our new fundamental knowledge and is generally long term with its goals forecast against broad areas of Air Force interest. The Research Program is currently funded for $93 million and will increase to approximately $103 million in FY 1966.

The Air Force Research Program is managed by the Air Force Office of Aerospace Research (OAR) in Washington, D. C., and conducted by its laboratories and field organizations.

The OAR Aerospace Research Laboratories concentrate their activities in the technical domains of general plasma and solid state physics chemistry research, hypersonic research, theoretical and applied mathematics. The work is toward the basic end of the research spectrum. Individual contracts are generally small and essentially seek to buy brain power to supplement the in-house capability. Large facilities and amounts of equipment are not essential for contractors to compete in this type of work.

Typical of the work of the OAR Air Force Cambridge Research Laboratories is the broad environmental research program which it conducts. The program extends from the analyses of terrain features for identifying unique landing sites for specialized aircraft operations and returning space vehicles to the study of solar electromagnetic and charged particle radiation to determine the extent of this danger to our astronauts. . . .

The Air Force Office of Scientific Research serves as our main interface with the academic research world. It sponsors a broad extramural contract and grant progam in all areas of scientific interest to the Air Force. It welcomes proposals for research work from all academic sources.

Exploratory Development.

Next in the research and development spectrum is Exploratory Development. Here the Air Force laboratories apply technology to the solution of specific military problems, short of major development programs. The program seeks to demonstrate the feasibility of a proposed solution. This type of work may vary from applied research experiments to quite sophisticated bread board hardware testing, as well as study and analysis efforts. . . .

As I discuss the Exploratory Development program, I will do so in terms of the major technical areas in which the Air Force seeks your assistance, and will indicate the Air Force laboratory which has prime management responsibility for each area.

The Air Force Flight Dynamics Laboratory conducts programs in structures, flight mechanics, flight control, vehicle dynamics, environmental control and recovery and crew station. . . .

The total Exploratory Development contract program in the flight dynamics area will be a little over $19 million in FY 1966.

I am strongly convinced, as I am sure many of you are, that materials research and development will continue to be a key pacing technology for future weapon systems. The Air Force Materials Laboratory will be looking to its industry counterparts not only to create new materials but to apply these new materials in components and subsystems. Two areas that will continue to receive major emphasis by the Air Force are polymers and composite materials. . . .

The Air Force Exploratory Development contract program in materials will run approximately $23 million in FY 1966.

The Air Force Weapons Laboratory has several unique requirements. One continuing problem is the determination of the vulnerability of our weapon systems to a nuclear environment. We are constantly faced with the need to test whole systems, subsystems and components in an appropriate nuclear environment. This is not possible; hence we seek to simulate the effect of nuclear weapons by various techniques, in order to obtain further knowledge in this area. We will continue to require your ideas and assistance in the development of simulation techniques and in the refinement of mathematical models in this field.

The Air Force also has an organization responsible for conventional weapon R&D, the Directorate of Armament Development at Eglin Air Force Base, better known throughout the Air Force as RTD's Detachment 4. While interested in the long range view of conventional weapon development, Detachment 4 specializes in the quick response, rapid fire fix wherever we encounter deficiencies in our conventional armament. As you realize this is an area of intense interest at present and Detachment 4 will contract for over $5 million on conventional weapon development in FY 1966.

The Air Force Avionics Laboratory has many technical objectives whose attainment will require contractor support. For example, we still have difficulties in communicating through a plasma sheath surrounding reentry vehicles. Investigations in this area include: (1) the use of coolants to control the temperature of hot ionized gases so that RF telementry communications may be received from or by the vehicle; (2) shaping techniques to alter the shock front thus partially reducing the ionization; and (3) use of strong magnetic fields as an aid to propagation. . . .

The Air Force Avionics Laboratory will let contracts for approximately $67 million for airborne electronics Exploratory Development in FY 1966.

In our Air Force Aero Propulsion Laboratory, efforts are under way in turbine engine and ramjet propulsion, electric propulsion, power generation and on improved fuels and lubricants. We are interested in high thermal efficiency engines with broad operating ranges and improved electric propulsion devices. Concurrent development of electric power generation equipment for such devices is also neded.

. . . Air Force Aero Propulsion Exploratory Development contract effort will amount to almost $32 million in FY 1966.

The Air Force Rocket Propulsion Laboratory works closely with industry in meeting Air Force requirements. In solid propellant rocket technology, we need to prove the flexibility of the restart-pulsed concept for air launched and last stage vehicles. Demonstration of thrust modulation is now in the very early stages. The pulsed and thrust variation technology is particularly important where large thrusts and high accelerations are required in braking applications.

In liquid propellant rocket technology we are working together for a simple storable propellant rocket module which can be used in multiples. For spacecraft, variable thrust and precise reproducible impulse and altitude control are necessary. Future orbital missions of the Air Force may require large incremental velocities. This factor opens the door to consideration of the high performance cryogenic propellants and the need for improvement in high pressure chamber design. . . .

Artist's Concept of the X-21A Laminar Flow Control Aircraft, an Air Force Advanced Development Program.

Air Force Exploratory Development contract effort in rocket propulsion in FY 1966 will be approximately $27 million.

The Rome Air Development Center is engaged in R&D programs in surveillance technology, intelligence collection processing, reconnaissance data handling, communications, computer technology and data presentation.

They will spend approximately $29 million on Exploratory Development in these areas in FY 1966.

The Aerospace Medical Division of the Air Force Systems Command is working in these technical areas: biological — medical sciences; arctic environment — human factors research; aerospace biomedical, biological and behavioral sciences; personnel requirements — concepts and techniques, classification, training and utilization; biological, bioinstrumentation, and behavioral research; and epidemiology and laboratory medicine.

This FY 1966 Exploratory Development contract effort will amount to approximately $13 million.

Advanced Development.

Let me shift gears now to discuss the Air Force Advanced Development programs. Here the Air Force seeks to experimentally demonstrate a technical capability beyond the existing state of the art. It is characterized by the development of hardware for experimental or operational test. This program provides a concrete interface between the laboratory technology programs I have been describing and the engineering design of military systems. It provides the two to three-year building blocks for system development in the form of demonstrated subsystem capabilities.

It is here that the type of realistic data required to initiate a Program Definition Phase (PDP) is developed. The Advanced Development program has a funding level of approximately $320 million for FY 1965 and is projected to increase to $479 million in FY 1966. . . .

Some of the larger and more complex Advanced Development programs require management procedures similar to those of the system programs, and are managed and procured by the System Divisions of the Air Force Systems Command. These are programs like the X-15 and the X-21A Laminar Flow Control Aircraft. . . .

Other programs are technology demonstrations such as the Air Force Materials Laboratory program to demonstrate the use of boron composite materials in a variety of structural roles in aerospace vehicles. Another example is the program to demonstrate V/STOL aircraft technology. . . .

Before going on, I want to give you a better feeling for the overall scope of the programs the Research & Technology Division laboratories are conducting. For example, in FY 1966 the RTD will spend approximately $464 million in Exploratory and Advanced Development programs. At present, the RTD has some 290 active projects with over 6,500 R&D contracts for a total value of approximately $1.6 billion.

I emphasize these numbers to indicate that these programs, unlike system development programs, are small enough to be within the capability of any organization having a competent technical staff and an interest in working with the Air Force. We solicit your participation in these programs. We will evaluate your proposal on the basis of Air Force interest and your technical competency to perform the job — not the size of your organization.

Several examples come to my mind which illustrate the close interrelationships that can be realized by the Air Force-industry team. For instance, the Air Force Rocket Propulsion Laboratory has, for some time, conducted a successful series of planning meetings with industry.

The Independent Research and Development Program is another example of the Air Force-industry team in action. This is a program of research and development without the sponsorship of a contract or grant and is recognized as essential in maintaining and improving the contractor's technical competence and competitive position. The DOD review of these programs, in which the Air Force participates, provides a valuable technical interchange in which the Air Force scientists and engineers learn of the latest accomplishments of industry and, at the same time, present Air Force areas of interest for industry to consider for future independent efforts. The effort has already paid many dividends to both our contractors and the Air Force. . . .

There are three basic ways to do business with the Air Force laboratories. First and the most frequently used, of course, is the direct solicitation method — that is we go out and directly solicit you to propose on a specific project, based on our knowledge of your capability and past accomplishment.

Second, we have the procurement synopsis program. We are required by law to place our programs in the Commerce Daily which is published by the Department of Commerce. You have an opportunity to review what we are doing and, if you have the capability, you are invited to get in touch with the designated Air Force Procurement office and ask to be included in the competitive bid process.

The last method is the unsolicited proposal. We invite industry at any time, based on knowledge of our requirements, to visit our laboratories and propose to us specific solutions to our problems.

Finally, the Air Force has gone to considerable effort to identify for you our major technical problems. Each Air Force laboratory has listed its major technical objectives in each assigned area of technology. These we have packaged in individual volumes, many of them classified, for each of 38 technical domains. We call these volumes our Technical Objective Documents, or TOD's, and they are available to scientific and industrial organizations who possess an R&D capability and the requisite security clearance. In each case only those documents are released which cover technical areas in which the organization has a capability. The TOD's describe not only Air Force technical objectives, but also cover the present state of the art, some possible approaches to our objectives and the Air Force laboratory which has prime responsibility in that technical domain. . . .

We would like all of you who have an interest, and an R&D capability, to participate in the TOD release program, and to submit proposals for solution to our problems. If your organization desires to participate in the program, you may obtain the necessary information from the nearest Scientific and Technical Liaison Office (see listing on page 21), or by writing to my headquarters at Bolling Air Force Base, D. C.

There are 23 Scientific and Technical Liaison Offices located throughout the United States, whose primary function is to provide the Air Force technical representation on R&D efforts which are the responsibility of, or are of direct interest to, the Air Force. These offices provide a direct channel for obtaining additional information on any of the programs I have discussed today. One of their major jobs is to help you in your dealings with the laboratories, divisions, or centers of the Air Force Systems Command.

I want to leave you with the thought that we in the United States have no corner on technological breakthroughs, and I don't have to emphasize to you the consequences of a potential enemy breakthrough that is not offset by a corresponding United States advance. To guard against such technological surprises as well as to provide the technology required to support our defense efforts, we must endeavor to maintain an aggressive research and technology program.

Procurement & Production Air Force Systems Command

Maj. Gen. G. F. Keeling, USAF
Deputy Chief of Staff for
Procurement & Production
Air Force Systems Command

The Aeronautical Systems Division at Wright-Patterson Air Force Base, Ohio, is responsible for the largest central procurement operation in our command. It has five major aeronautical systems in acquisition or project definition phase at this time.

The F-4 Phantom series . . . includes both fighter and reconnaisance versions.

From FY 65 funds we programmed several hundred aircraft for over $850 million, and in FY 66 we plan a sizeable additional buy for about $650 million. . . . The current program plans call for expenditures of around $2.5 billion, with deliveries extending well into 1968. . . .

There is probably little I can say about the F-111A which has not already been said. . . . From the FY 65 program, we will buy the first ten operational aircraft and additional operational aircraft are planned from FY 66 and subsequent funds. . . .

As you know, we are also developing the F-111B for the U. S. Navy, and the first four operational F-111B's are in the Fiscal 66 budget. . . .

There are hundreds of subcontractors, vendors and suppliers engaged in this program, and many hundreds more will be needed for this program.

The third major aeronautical system, the C-141, is a large air cargo and troop transport. . . .

We will acquire several hundred C-141's over the next several years. The total investment will be in excess of a billion dollars. The airplane is FAA "Type Certificated" and thereby has a high potential for commercial airline application.

Project definition contracts for the C-5A were awarded in late December 1964 to competing airframe and propulsion contractors. As now planned, this program will extend well into the 1970's, with a total program investment in excess of $2 billion.

The T-38, a modern twin engine supersonic jet pilot trainer, has been in acquisition for some time. Our FY 65 program includes over 140 airplanes, with a program cost of about $90 million. The FY 66 budget contains a planned program of $38 million. The F-5 is a ground support fighter version of the T-38, and we are buying it in support of military assistance programs. The FY 65 and 66 programs are about $85 million and will continue. . . .

The AN/ASN-24 (V) navigation computer is an excellent illustration of the multitude of black boxes required for this complete system, and it is also an excellent illustration of the subsystems, components and hardware items purchased by the Aeronautical Systems Division at an average rate of about $1 billion per year. . . .

Our current forecast of future purchases of this system is about $25 million. . . .

Moving now to the Electronic Systems Division (near Boston), the 407L (Tactical Air Control System) illustrates an integration of sophisticated radar, electronics computers and communications equipment . . . Some $43 million are in our FY 66 budget for acquisition of currently available hardware for this system.

Air Communications Network. Each year a substantial portion of the Air Force budget is used to acquire or to modernize specific links of the Department of Defense Global Communications System. Air Force purchases to support systems like this average several million dollars each year, and there is no reason not to expect this same level to continue in the future.

Spacetrack is another example of the 20-odd specialized major command, control and communication projects managed and procured by the Electronic Systems Division. The division's FY 65 program exceeded $350 million, and the FY 66 budget is over $300 million. . . .

At our Ballistic Systems Division at San Bernardino, fielding of the Atlas and Titan missiles has been completed for some time. Minuteman I missiles have been going into Strategic Air Command operational squadrons at more than one a day for almost two years. Minuteman II missiles have increased range for payload, improved accuracy, and they can be launched by radio from an airborne command post.

The Boeing Company has the contract for assembly and test of Minuteman II.

The combined FY 65 and FY 66 programs will exceed $1.25 billion.

Another major program at this division is an Advanced Ballistic Re-Entry System developmental program. . . .

This program is running about level at $150 million each year and will continue.

At our Space Systems Division, the Titan III booster is in engineering development. Our work is continuing on the Manned Orbiting Laboratory payload, and the two projects together have been planned for almost half a billion dollars for FY 65 and 66 combined. . . .

Each year we receive well over 2,000 voluntary unsolicited proposals, ranging from programs involving basic research to production hardware proposals. Many come from small firms or even from individuals, and each proposal receives careful and extensive evaluation. . . .

In addition to the procurement actions to be completed by our product divisions in the organizations I have just described, the test centers will require continued updating of instrumentation and test facilities to insure complete evaluation of our new weapon systems as well as the refinement of systems in the operational stage.

Each organization — production division or center — offers almost unlimited opportunities to do business with the Air Force Systems Command. Each Systems Command buying activity maintains a mechanized source data file. . . .

Atop the Atlas 134 is mounted the ABRES (Advanced Ballistic Re-entry Systems) vehicle. ABRES was designed to record data to help R&D personnel develop more effective nose cones for all intercontinental ballistic missiles.

If you are uncertain as to where to go, please write directly to the Assistant for Small Business or Contractor Relations and Source Specialist, Air Force Systems Command, Andrews Air Force Base, Washington, D. C. 20331. . . .

Our hardware contracts include: (1) firm reliability requirements to insure high mean time between failure; (2) incentive provisions to insure required performance; (3) value engineering to eliminate gold plating, and many other arrangements which serve to foster the best possible end-item considering cost, maintenance, performance and reliability. We are in a very competitive environment, but I think that I have shown that opportunities do exist. The initiative is up to you.

Air Force Logistics Command

Maj. Gen. L. W. Fulton, USAF
Director
Procurement & Production
Air Force Logistics Command

. . . In order to perform our primary mission — keeping Air Force weapons and support systems in a "GO" status — Air Force Logistics Command (AFLC) is spending $2.2 billion for procurements from industry in FY 65, and in FY 66 our planning budget is for just about the same amount.

With these dollars we buy (1) initial spare parts for aircraft and missiles; (2) replenishment spare parts for aircraft and missiles; (3) missile propellants; (4) electronic systems spare parts; (5) end items such as aerospace ground equipment and special purpose vehicles; (6) aircraft, missile and other modification programs; (7) contract maintenance and (8) services. . . .

The Air Force has a strong Base Self Sufficiency Program under which commercial type services, supplies, equipment and material are bought by the individual base. Each year the more than 150 Air Force Bases in the Zone of Interior spend approximately $1 billion on local or base procurements. About one fourth of this amount is spent by AFLC's base procurement offices. The locations of these base procurement offices are given in the Air Force pamphlet "Small Business and the Air Force." This pamphlet — Air Force Pamphlet 70-1-4 — is a handy document to have.

It is our policy to place our procurements with responsible contractors who will produce quality items on schedule, at the lowest sound price.

The Logistics Command is continually endeavoring to improve our operations by becoming more efficient and responsive. In order for us to make these improvements we need the cooperation and the help of industry. Therefore, I will spend just a few minutes outlining things which we in the Logistics Command believe that industry can and will do to help us improve the support of the Air Force systems. . . .

Logistics Considerations in Design.

It has long been acknowledged that, even though a new, advanced weapon system may be technically feasible, such a system creates more operational problems than it is worth if the design does not provide adequate maintainability, reliability and supportability.

Potential prime contractors are now expected and required to spend considerable time and effort to make those hard but important decisions during the early stages of programs which will enhance maintainability and reliability. Working with the Systems Command, our command is insuring that logistics considerations are included during the conceptual and definition phases on new programs. . . .

We want to see maintainability, reliability, quality and value engineering designed into new systems at the start, rather than injecting them by expensive and duplicative effort after the system is in production and operation. The selection of components with proven reliability for use in new systems is but one example of the things industry can do which will produce maintainability and reliability benefits when the system goes operational.

Planning for Standardization and Ultimate Cost.

The Air Force, in the past few years has been able to bring about a declining trend in the total number of items in our inventory. We have learned that annual competitive procurements of components based on performance type specifications result in multiple suppliers, additional requirements for aerospace ground equipment and test equipment and, more important, in large increases in the numbers of "bit and piece" spare parts in our inventory. This actually increases the Air Force's cost of operation.

The Logistics Command, with the full cooperation of the Systems Command, has adopted the procedure of evaluating proposals for accessories and complex components on an ultimate cost basis. In evaluating proposals for new items which perform a similar or identical function to an item already in the inventory, we give consideration to formerly "hidden costs." We determine the need for and the cost of additional aerospace ground equipment, overhaul and maintenance shop equipment, technical data and manuals, training of personnel and the cost associated with introducing new spare "bit and piece" items into our inventory. These hidden costs are added to item prices to determine the real or ultimate cost. When ultimate cost evaluation is to be used, we include specific requirements in the Request for Proposals which insures a fair and impartial evaluation and contractor selection.

This program will pay off in large benefits because it will help foster standardization and will improve our capability of keeping the Air Force in a "GO" status, with a minimum amount of dollars and resources tied up in spare parts and support equipment which remain on the ground.

Colonel J. J. Treacy, AFLC's Deputy Director of Procurement and Production, tries out the console of a 301 computer. This is the type computer used for the Command's standard mechanized bidders' list system.

Competition with Confidence.

The Air Force Logistics Command has a buying policy which emphasizes "competition when it makes sense." We have implemented the DOD High Dollar Spare Parts Breakout Program under our "Competition with Confidence" concept. The basic premise of this concept is that the operational integrity of a system shall not be compromised.

"Competition with Confidence" is an Air Force-industry cooperative venture in which the prime contractor who has the most intimate knowledge of the system and its components recommends to the Air Force the procurement category of spare part items. . . .

The prime contractor also identifies other items of a critical nature which he himself does not produce, but which can safely be bought from the prime contractor's qualified source or sources without jeopardizing the integrity of the system in operation. . . .

Lastly, the contractor designates those critical items which he produces or on which he himself performs vital inspection or test procedures, or which require specific prime contractor management and surveillance efforts. . . .

The Air Force then reviews the contractor's recommended coding along with his justification and finally establishes the procurement method code. . . .

Mechanized Bidders' List.

I feel that many industry representatives will be interested in a new program we are presently implementing in AFLC Air Materiel Areas (AMA) because it involves you. As you know, any effective buying organization must maintain an up-to-date bidders' list or source file. In the past each of our AMA's maintained a bidders' list; however, there was little similarity in the details of information available and the responsiveness to the buyers' needs among the various systems used.

Our new standard mechanized bidders' list system is being placed into operation and should be in full swing by April 1965 at all AFLC AMA's except Rome. Rome, which is due to phase out, will not participate in this program. Each of our AMA's will use the 301 computer for the mechanized bidders' list. It provides a rapid response to an individual buyer's requirements for a list of potential sources for a specific commodity, item or service. In order to develop and implement this new system, we found it necessary to standardize the individual AMA commodity list booklets. This will correct the wide disparity in the commodity coding systems formerly used by the different AMA's. Under the standardized program a four digit code is used by all AMA's.

All AMA's, except Rome, have issued new commodity list booklets. Your companies have or will be submitting a new revised Bidders' Mailing List Application (Standard Form 129) and Commodity List Data (AFPI Form 24). Instructions for accomplishing the forms are contained in the booklets. If you haven't received your new Commodity List Booklets, you can obtain copies by direct contact with the AMA's or through the nearest Contract Management District (CMD).

Careful selection of items is essential to insure that your firm is properly listed. Indiscriminate selection of items or services should be avoided in order to preclude the listing of your firm for items which you cannot furnish. We recognize that an individual commodity in the lists, such as "gasket," may cover a broad spectrum of items.

Also, giving recognition to technological advances in materials and manufacturing processes, we included a new section in the commodity lists to cover manufacturing processes. In addition to identifying commodities you can furnish, you will also list manufacturing processes and methods in which you are proficient. . . . This information will be helpful to buyers in identifying potential sources when it is known that unusual or specialized manufacturing processes are involved. . . .

AFSC Scientific and Technical Liaison Offices (STLO)

GEOGRAPHIC AREA

AFSC STLO (RTSAA)
c/o The Boeing Co.
Seattle, Wash. 98124
Phone: (Area Code 206)
655-5744

AFSC STLO (RTSAB)
Waltham Federal Center
424 Trapelo Road
Waltham, Mass. 02153
Phone: (Area Code 617)
894-2400, Ext. 331/332

AFSC STLO (RTSAC)
O'Hare International Airport
PO Box 8758
Chicago, Ill. 60666
Phone: (Area Code 312)
CYpress 6-4411, Ext. 397

AFSC STLO (RTSAD)
500 Ervay St.
Dallas, Tex. 75201
Phone: (Area Code 214)
RIverside 9-2025

AFSC STLO (RTSAE)
113 St. Clair Ave., N.E.
Cleveland, Ohio 44114
Phone: (Area Code 216)
CHerry 1-7900, Ext. 7133/7134

AFSC STLO (RTSAL)
AF Unit Post Office
Los Angeles, Calif. 90045
Phone: (Area Code 213)
643-3805, Ext. 32985/33805

AFSC STLO (RTSAN)
111 East 16th St.
New York, N. Y. 10003
Phone: (Area Code 212)
SPring 7-4200, Ext. 775/778

AFSC STLO (RTSAO)
225 Jarvis St.
Toronto, Ontario, Canada
Phone: (Area Code 416)
EMpire 2-6211, Ext. 2465

AFSC STLO (RTSAS)
International Science Center
452 DeGuigne
Sunnyvale, Calif. 94035
Phone: (Area Code 408)
245-9535/9536

AFSC STLO (RTSAW)
c/o Department of the Navy
Washington, D. C. 20360
Phone: (Area Code 202)
OXford 6-3594/6-2471

AFSC STLO (RTSUM)
Massachusetts Institute of
Technology
68 Albany St.
Cambridge, Mass. 02139
Phone: (Area Code 617)
UNiversity 4-6900, Ext. 3509

ARMY

AFSC STLO (RTSRA)
Aberdeen Proving Ground
Bldg. No. 314
Aberdeen Proving Ground, Md.
21005
Phone: (Area Code 301)
272-4000, Ext. 3494

AFSC STLO (RTSRE)
Bldg. No. 5101
Edgewood Arsenal, Md. 21010
Phone: (Area Code 301)
676-1000, Ext. 26259/23249

AFSC STLO (RTSRF)
U. S. Army Electronics R&D Lab
Fort Monmouth, N. J. 07703
Phone: (Area Code 201)
535-1309, Ext. 4478

AFSC STLO (RTSRZ)
U. S. Army Tropic Test Center
PO Drawer 942,
APO, New York, N. Y. 09827

NAVY

AFSC STLO (RTSND)
U. S. Naval Air Development
Center
Johnsville, Westminster, Penn.
18974
Phone: (Area Code 215)
OSborne 5-7000, Ext. 431

AFSC STLO (RTSNM)
Naval Missile Center
Point Magu, Calif. 93041
Phone: (Area Code 805)
488-3511, Ext. 8012/8236

AFSC STLO (RTSNR)
Naval Research Laboratory
Washington, D. C. 20390
Phone: (Area Code 202)
JOhnson 3-6600, Ext. 2266

AFSC STLO (RTSNT)
Naval Ordnance Test Station
China Lake, Calif. 93556
Phone: (Area Code 805)
FRontier 7-7411, Ext. 71403

NASA

AFSC STLO (RTSSA)
Ames Research Center (NASA)
Moffett Field, Calif. 94035
Phone: (Area Code 415)
YOrkshire 7-3056

AFSC STLO (RTSSL)
Langley Research Center (NASA)
Langley Air Force Base, Va. 23365
Phone: (Area Code 703)
764-2944/764-4426

AFSC STLO (RTSSM)
NASA Manned Spacecraft Center
Houston, Tex. 77017
Phone: (Area Code 713)
HUnter 3-2126

AFSC STLO (RTSSW)
Lewis Research Center (NASA)
21000 Brookpark Road
Cleveland, Ohio 44135
Phone: (Area Code 216)
267-2911

EDITOR'S NOTE

Due to the large number of end of the fiscal year contract awards and other items of interest to industry, the Bibliography Section of the *Defense Industry Bulletin* has been withheld for this month only.

Emphasis Placed Upon Security Classification Guidance for Industry

DOD Instruction 5210.47, Security Classification of Official Information, Dec. 31, 1964, requires that a classification guide, based upon classification determinations made by the original classifying authority, shall be issued for each program and project, and that successive operating echelons shall prescribe such further detailed guidance as may be necessary.

Each defense contract involving classified information is supported by a DD Form 254, Security Requirements Check List. Research and analysis by the DOD Directorate for Classification Management is under way to determine the proper inter-relationship for purposes of classification guidance between any particular contract supported by a DD Form 254 and the broader program or project of which that contract is only a single part. A correct determination of this relationship should result in more consistent and uniform classification guidance for industry and in overall operating economies and cost reductions which can be realized through good classification management practices.

Approved Map and Plan Security Cabinets Available to Contractors

Approved map and plan security cabinets are now on the Federal Supply schedule and available to all authorized contractors who have requirements to store classified Defense information.

There are two types of cabinets available. The first is identified as a Class Five cabinet and affords protection for:

30 man-minutes against surreptitious entry.
20 man-hours against manipulation of the lock.
20 man-hours against radiological attack.

There is no forced entry requirement. The other is identified as a Class Six cabinet and affords protection for:

30 man-minutes against surreptitious entry.
20 man-hours against manipulation of the lock.
20 man-hours against radiological attack.
10 man-minutes against forced entry.

Both of these cabinets have been tested and approved under tests defined in Interim Federal Specifications AA F-00363 (GSA-FSS) and represent an important advance in security protection for classified plans and bulk material.

Industrial Civil Defense Management Course Offered

A new course in Industrial Civil Defense Management has been added to the curriculum of the three Office of Civil Defense (OCD) training schools for FY 66.

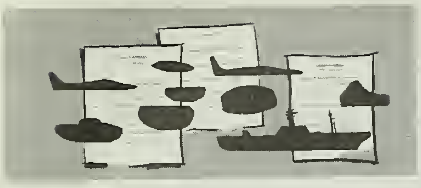
The new course is being given to refine the professional management capabilities of business and industry leaders for meeting industrial civil defense responsibilities.

Although the course is primarily designed for industrial and business civil defense coordinators, it is also open to professional civil defense personnel in Federal, State and local government.

Registration dates for the course have been set for September 12, 1965, February 27 and April 24, 1966.

Subjects to be covered include industrial preparation for civil defense, shelter engineering problems, planning and organization for survival in industrial facilities and restoration of production and distribution following attack. Other areas to be included are shelter management, industrial mutual aid for civil defense management and educating employees for civil defense.

The course will be offered at the OCD Staff College, Battle Creek, Mich.; OCD Eastern Training Center, Brooklyn, N. Y.; and the OCD Western Training Center, Alameda, Calif.



DEFENSE PROCUREMENT

DEFENSE SUPPLY AGENCY

4—**Gulf Oil Corp.**, Houston, Tex. $4,738,946. 22,000,000 gallons of motor gasoline and 15,000,000 gallons of burner fuel. Defense Fuel Supply Center, Washington, D.C.

7—**Cities Service Oil Co.**, New York, N.Y. $1,141,670. 13,430,000 gallons of JP–5 jet fuel. New York, N.Y. Defense Fuel Supply Center, Washington D.C.

9—**B. G. Colton Co.**, New York, N.Y. $1,256,250. 2,085,710 yards of cotton sateen cloth. Monroe, Ga., Batesberg, S.C., and Columbus, Ga. Defense Clothing and Textile Supply Center, Philadelphia, Pa.

11—**Borg-Warner Corp.**, Chicago, Ill., $1,333,549. 404,106 steel helmets. Chicago. Defense Clothing and Textile Supply Center, Philadelphia, Pa.

15—**Shell Oil Co.**, New York, N.Y. $1,394,902. Aviation fuel and lubricants and refueling and defueling services at commercial airports. Defense Fuel Supply Center, Washington, D.C.

17—**Nantex Riviera Corp.**, New York, N.Y. $1,326,580. Cotton underwear. Greenwood, S.C. Defense Clothing and textile Supply Center, Philadelphia, Pa.

18—**Oscar Mayer and Co.**, Madison, Wis. $1,040,760. 2,589,600 cans of cooked ham. Defense Subsistence Supply Center, Chicago, Ill.

21—**Supreme Mfg. Co.**, Dallas, N.C. $1,157,725. 2,500,000 men's cotton undershirts. Dallas. Defense Clothing and Textile Supply Center, Philadelphia, Pa.

24—**Evan Jones Coal Co.**, Anchorage, Alaska. $2,273,468. 245,515 tons of coal. Defense Fuel Supply Center, Washington, D.C.

28—**Shell Oil Co.**, New York, N.Y. $1,768,437. Gasoline and fuel oil. Defense Fuel Supply Center, Washington, D.C.

—**Socony Mobil Oil Co. Inc.**, New York, N.Y. $1,125,123. Gasoline and fuel oil. Defense Fuel Supply Center, Washington, D.C.

—**W. R. Grace and Co.**, Fords, N.J. $1,340,338. Aircraft engine lubricating oil. Defense Fuel Supply Center, Washington, D.C.

—**American Oil and Supply Co.**, Newark, N.J. $1,300,594. 932,760 quarts of aircraft engine lubricating oil. Defense Fuel Supply Center, Washington, D.C.

29—**J. P. Stevens Co.**, New York, N.Y. $1,259,609. 1,700,000 yards of cloth. Great Falls and Wallace, S.C. Defense Clothing and Textile Supply Center, Philadelphia, Pa.

—**Burlington Industries, Inc.**, New York, N.Y. $1,953,111. 2,478,000 yards of wind resistant cotton cloth. Cramerton, N.C. Defense Clothing and Textile Supply Center, Philadelphia, Pa.

30—**Riegel Textile Corp.**, New York, N.Y. $1,441,766. 3,000,000 yards of cotton sateen cloth. Scottdale and Trion, Ga. Defense Clothing and Textile Supply Center, Philadelphia, Pa.

—**Tumpane Co., Inc.**, Terre Haute, Ind. $1,529,859. Supplies and services for operation and maintenance of the Defense Industrial Plant Equipment Facility, Terre Haute, Ind. from July 1, 1965 to June 30, 1966. Defense Industrial Plant Equipment Center, Memphis, Tenn.

—**Standard Oil Co. of Calif.**, San Francisco, Calif. $2,319,678. Gasoline, automotive diesel fuel, solvent and fuel oil. Defense Fuel Supply Center, Washington, D.C.

CONTRACT INDEX

Contract information is listed in the following sequence: Date — Company — Dollar Value — Material — Location Work Performed — Contracting Agency

---

ARMY

1—**MacGregor Triangle Co.**, Boise, Idaho. $3,643,879. Work on John Day Lock and Dam Project. Klickitat County, Wash. District Corps of Engineers, Walla Walla, Wash.

—**Construction Ltd.**, Bordentown, N.J. $1,324,598. Construction of a 70-bed air evacuation receiving facility and expansion of clinical areas at Walson Army Hospital. Fort Dix, N.J. District Corps of Engineers, New York, N.Y.

—**Chrysler Corp.**, Centerline, Mich. $1,270,952. Production engineering services related to M–60 series tank. Centerline. Army Tank Automotive Center (AMC), Warren, Mich.

—**Aircraft Armaments, Inc.**, Cockeysville, Md. $1,886,000. Research and development of special purpose individual weapons system. Cockeysville. Army Weapons Command (AMC), Rock Island, Ill.

2—**Patton-Tulley Transportation Co.**, Memphis, Tenn. and **Pensacola Construction Co.**, Kansas City, Mo. $1,353,110. Work on the Mississippi River and Tributaries, Revetment and Bank Projection Project. Friarpoint, Miss. and Densford, Tenn. Engineer District, Memphis, Tenn.

3—**Bell Helicopter Co.**, Hurst, Tex. $1,451,393. Helicopters. Hurst. Aviation Command (AMC), St. Louis, Mo.

4—**Potashnick Construction Co., Inc.**, Cape Girardeau, Mo. $10,476,783. Construction of a dam and dike at the DeGray Reservoir Project. Arkadelphia, Ark. Engineer District, Vicksburg, Miss.

—**Perini Brothers**, Framingham, Mass. $23,266,207. Work on the Uniontown, Ky., Lock and Dam Project. Engineer District, Louisville, Ky.

—**JV-H. C. Smith Construction Co., and M. M. Sundt**, Compton, Calif. $1,082,770. Modification of Pads 1 and 3 at the ABRES complex, Vandenberg AFB, Calif. Engineer District, Los Angeles, Calif.

7—**Eagle Engineering Corp.**, Louisville, Ky. $1,394,828. 2,102 generator sets. Louisville. Engineer Procurement Office (AMC), Chicago, Ill.

8—**Sentinel Electronics, Inc.**, Philadelphia, Penn. $1,004,505. Radio sets for use in Army vehicles. Hazeltown, Pa. Electronics Command (AMC), Philadelphia, Pa.

—**General Electric Co.**, Syracuse, N.Y. $2,912,000. Design and development of a portable chemical agent alarm. Pittsfield, Mass.; Owensboro, Ky; Syracuse and Schenectady, N.Y. Edgewood Arsenal (AMC), Md.

—**Allied-Webb**, South Gate, Calif. $1,713,880. Modification to Pad 3 (Point Arguello Launch Complex) for TITAN III. Vandenberg AFB, Calif. Engineer District, Los Angeles, Calif.

—**Baldwin, Lima, Hamilton Corp.**, Philadelphia, Pa. $1,220,462. 13 turbine governors for the John Day, Little Goose and Lower Granite Locks and Dams. Eddystone, Pa. District Corps of Engineers, Philadelphia, Pa.

—**Deep South Construction, Inc.**, Montgomery, Ala. $4,519,827. Construction work at Larson Field, Fort Benning, Ga. District Corps of Engineers, Savannah, Ga.

—**General Motors Corp.**, Detroit, Mich. $1,069,750. Design, development, fabrication and test of an engine for the US/FRG (Federal Republic of Germany) Main Battle Tank. Detroit. Army Tank Automotive Center (AMC), Warren, Mich.

9—**Bogue Electric Mfg. Co.**, Paterson, N.J. $3,902,400.

976 generator sets. Paterson. Engineer Procurement Office (AMC), Chicago, Ill.

10—**Martha-Mac Corp.**, Memphis, Tenn. $1,726,405. Work on Mississippi River at Ashbrook-Miller Bend, Ark., and Mississippi Project. Near Greenville, Miss. District Corps of Engineers, Vicksburg, Miss.

11—**American Electronic Laboratories, Inc.**, Colmar, Pa. $4,520,000. Electronic equipment. Colmar. Army Electronics Command (AMC), Fort Monmouth, N.J.

—**Kaiser Jeep Corp.**, Toledo, Ohio. $1,195,979. 693 Utility trucks. Toledo. Army Tank Automotive Center (AMC), Warren, Mich.

—**Mason Laboratories Division, Hallicrafters Corp.**, Wilton, Conn. $2,539,668. 200 radio sets (AN/GRC–26) and 120 radio transmitters (T–368/URT). Wilton. Electronics Command (AMC), Philadelphia, Pa.,

—**Hughes Aircraft Co.**, Culver City, Calif. $1,102,226. Research and development on TOW missile system. Tucson, Ariz. Los Angeles Procurement District (AMC), Pasadena, Calif.

—**Scovill Mfg. Co.**, Waterbury, Conn. $1,916,250. Ordnance items. Waterbury, Conn. Ammunition Procurement and Supply Agency (AMC), Joliet, Ill.

14—**Otis Elevator Co.**, Brooklyn, N.Y. $2,288,619. Image interpretation equipment (AN/TSQ–43). Brooklyn. Electronics Command (AMC), Philadelphia, Pa.

—**Collins Radio Corp.**, Dallas, Tex. $4,229,666. Designing, furnishing and installing of operational intercom system for launch complex No. 39. Merritt Island, Fla. Canaveral Engineer District, Merritt Island, Fla.

15—**Raytheon Co.**, Burlington, Mass. $3,842,246. Air transportable radio communications (AN/TSC–38) equipment. Hawthorne, Calif. Electronics Command (AMC), Philadelphia, Pa.

—**Harrice and Brooks, Inc.**, Riverdale, Md. $1,499,679. Work on the Chesapeake and Delaware Canal Project. Near Chesapeake City, Md. Engineer District, Philadelphia, Pa.

—**Vinnell-Mannix-Fuller-Dillingham**, Alhambra, Calif. $71,956,573. Work on Little Goose Lock and Dam, Snake River, Project. Columbia and Whitman Counties, Wash. Engineer District, Walla Walla, Wash.

—**Mincom Division of Minnesota Mining and Mfg. Co.**, Camarillo, Calif. $1,500,000. Production of classified electronics equipment. Camarillo. Electronics Command (AMC), Fort Monmouth, N.J.

—**Pacific Dredging Co.**, Paramount, Calif. $1,221,648. Dredging and disposal work on Vancouver, Wash., Project. Paramount. District Corps of Engineers, Portland, Ore.

—**Perini Corp., Morrison Knudson Co., Inc., and C. H. Leavell Co.**, Framingham, Mass. $25,276,269. Work on Arkansas River and Tributaries, Robert S. Kerr Lock and Dam Project. Le Flore and Sequoyah Counties, Okla. District Corps of Engineers, Tulsa, Okla.

16—**Ling-Temco-Vought, Inc.**, Warren, Mich. $3,493,107. Advanced production engineering program for (XM561) 1¼ ton cargo trucks. Warren. Michigan Army Missile Plant (AMC), Warren, Mich.

—**I. D. Precision Components Corp.**, Jamaica, N.Y. $2,900,028. Ordnance items. Ammunition Procurement and Supply Agency (AMC), Joliet, Ill.

—**Caterpillar Tractor Co.**, Peoria, Ill. $1,318,637. 47 tractors. Peoria. Engineer Procurement Office (AMC), Chicago, Ill.

17—**R. F. Ball Construction Co., Inc.**, San Antonio, Tex. $2,077,000. 300 permanent bachelor officer quarters. Fort Sill, Okla. Engineer District, Albuquerque, N.M.

—**Grumman Aircraft Engineering Corp.**, Bethpage, L.I., N.Y. $1.758,833. Modification of OV–1B and OV–1C MOHAWK aircraft. Bethpage. Army Aviation Materiel Command (AMC), St. Louis, Mo.

18—**Bermite Powder Co.**, Saugus, Calif. $1,497,600. Photoflash cartridges. Saugus. Los Angeles Procurement District (AMC), Pasadena, Calif.

—**Fred Dietz Plumbing Co.**, Chicago, Ill. $1,044,530. Construction of a heating plant and installation of steam distribution lines. Fort Sheridan, Ill. Engineer District, Chicago.

—**FMC Corp.**, San Jose, Calif. $6,582,851. M113A1 armored personnel carriers. Charleston, W. Va. Army Tank Automotive Center (AMC), Warren, Mich.

—**Dyson & Co.**, Pensacola, Fla. $2,429,010. Construction of a three story medical facility with related utilities and a service and parking area. Tyndall AFB, Fla. Engineer District, Mobile, Ala.

—**Model Engineering & Mfg. Corp.**, Huntington, Ind. $6,106,177. Radio sets (AN–PRC–25) and receiver transmitters (RT505). Huntington and Salt Lake City, Utah. Procurement Dist. (AMC), Chicago, Ill.

—**Chamberlain Corp.**, Waterloo, Iowa. $1,014,000. Ordnance items. Waterloo. Ammunition Procurement and Supply Agency (AMC), Joliet, Ill.

21—**Silas Mason & Co., Inc.**, New York, N.Y. $1,457,255. Classified ammunition. Burlington, Iowa. Ammunition Procurement and Supply Agency (AMC), Joliet, Ill.

—**Remington Arms Co., Inc.**, Bridgeport, Conn. $9,562,865. Miscellaneous small arms ammunition. Independence, Mo. Ammunition Procurement and Supply Agency (AMC), Joliet, Ill.

—**Texas Instruments, Inc.**, Dallas, Tex. $4,500,000. Classified electronic equipment. Dallas. Electronics Command (AMC), Fort Monmouth, N.J.

—**Collins Radio Co.**, Cedar Rapids, Iowa. $1,542,488. Automatic direction finder sets (AN/ARN–83). Cedar Rapids. Electronic Command (AMC), Philadelphia, Pa.

—**Collins Radio Co.**, Cedar Rapids, Iowa. $1,539,965. Radio receiving sets (AN/ARN–82)(M). Cedar Rapids. Electronics Command (AMC), Philadelphia, Pa.

—**Remington Arms Corp.**, Bridgeport, Conn. $1,393,200. 45 caliber cartridges. Bridgeport. Frankford Arsenal (AMC), Philadelphia, Pa.

22—**E. L. Schofield, Inc.**, Rockford, Ill. $1,689,270. Heater kits for ¼-ton trucks. Rockford. Army Mobility Command (AMC), Warren, Mich.

—**Canadian Commercial Corp.**, Ottawa, Ont., Canada. $1,918,833. Doppler Navigation Radar components for MOHAWK aircraft. Montreal, Que. Electronics Command (AMC), Fort Monmouth, N.J.

—**Highway Products, Inc.**, Kent, Ohio. $1,778,907. Guided missile launchers. Kent. Army Missile Command (AMC), Huntsville, Ala.

—**Chrysler Corp.**, Warren, Mich. $1,310,346. Refurbishment, checkout and launch services of Redstone missiles and related ground support equipment. Warren. Army Missile Command (AMC), Huntsville, Ala.

23—**Gregg, Gibson & Gregg, Inc.**, Kissimmee, Fla. $1,471,823. Work on the Central and Southern Florida Flood Control Project. Kissimmee. District Corps of Engineers, Jacksonville, Fla.

24—**J. R. Francis General Contractors, Inc.**, El Paso, Tex. $2,383,272. Construction of range and instrumentation facilities at White Sands Missile Range, N.M. District Corps of Engineers, Albuquerque, N.M.

—**Eidal International, Inc.**, Albuquerque, N.M. $1,800,975. 210 trailer mounted laundries. Albuquerque. Army Mobility Equipment Center (AMC), St. Louis, Mo.

—**Stelman, Inc.**, Stamford, Conn. $1,031,637. Automatic Digital Network (AUTODIN). Stamford. Electronics Command (AMC), Philadelphia, Pa.

—**Penker Construction Co.**, Cincinnati, Ohio. $8,968,876. Construction and excavation work on the Deer Creek Reservoir Project, Pickaway County, Ohio. District Corps of Engineers, Huntington, W. Va.

—**La Pointe Industries, Inc.** Rockville, Conn. $1,821,327. Radio sets and ancillary items (AN/ARC–73). Rockville. Electronics Command (AMC), Fort Monmouth, N.J.

25—**Del E. Webb Corp.**, Phoenix, Ariz. $3,525,000. Construction of 110-bed hospital with dental clinic and out patient facilities. Fort Huachuca, Ariz. District Corps of Engineers, Los Angeles, Calif.

—**Hupp Corp.**, Canton, Ohio. $16,126,109. Multi-fuel engines for the 2½-ton truck. Canton. Army Mobility Command, (AMC), Warren, Mich.

—**Kaiser Jeep Corp.**, Toledo, Ohio. $57,700,708. M44 series 2½ ton trucks. Toledo. Army Mobility Command, (AMC), Warren, Mich.

—**General Dynamics Corp.**, Rochester, N.Y. $44,977,568. 1,017 digital subscriber terminal equipment and ancillary items for AUTODIN (Automatic Digital Network). Rochester. Electronics Command (AMC), Philadelphia, Pa.

—**Sperry Rand Corp.**, Washington, D.C. $1,320,000 Rental of data processing equipment. Utica, N.Y. Army Information and Data Systems, Office of the Chief of Staff.

—**Raytheon Co.**, Lexington, Mass. $17,865,016. Ground equipment and field maintenance equipment for HAWK missile system. Andover, Mass., Waltham, Mass. and Oxnard, Calif. Army Missile Command (AMC), Huntsville, Ala.

—**Raytheon Co.**, Lexington, Mass. $2,102,733. Engineering services for the HAWK missile system. Andover, Mass. Army Missile Command (AMC), Huntsville, Ala.

—**Southern Airways of Texas, Inc.**, Mineral Wells, Tex. $4,773,686. Training of helicopter pilots and maintenance of related aircraft. Fort Wolters, Tex. Purchasing and Contracting Office, Fort Wolters, Tex.

—**Day and Zimmermann, Inc.**, Philadelphia, Pa. $1,213,753. Miscellaneous conventional items, ammunition and components. Texarkana, Tex. Ammunition Procurement and Supply Agency, Joliet, Ill.

—**Remington Arms Co., Inc.**, Bridgeport, Conn. $6,956,648. Ordnance items. Bridgeport. Frankford Arsenal (AMC), Philadelphia, Pa.

28—**Magnavox Co.**, Urbana, Ill. $3,000,000. Classified electronic equipment. Urbana. Electronics Command (AMC), Fort Monmouth, N.J.

—**Hupp Corp.**, Canton, Ohio. $1,278,071. 2,316 engines. Canton. Army Mobility Equipment Center (AMC), St. Louis, Mo.

—**Olin Mathieson Chemical Corp.**, New York, N.Y. $4,351,877. Propellant charges, maintenance and support activities. Charlestown, Ind. Ammunition Procurement and Supply Agency (AMC), Joliet, Ill.

—**Chrysler Corp.**, Centerline, Mich. $1,667,599. Advanced production engineering services on the M60A1E1 selected turret program procurement. Centerline. Army Tank Automotive Center (AMC), Warren, Mich.

—**Heil Co.**, Milwaukee, Wis. $1,413,260. 12-ton semitruck tanks (M131A4C). Milwaukee. Procurement District (AMC), Chicago, Ill.

—**Aaron Torch and Sons, Inc.**, Macon, Ga. $2,068,800. Construction of a composite medical facility at Robins AFB, Ga. District Corps of Engineers, Savannah, Ga.

—**International Harvester Co.**, Washington, D.C. $1,146714. Various types of trucks and tractors. Fort Wayne, Ind.; Springfield, Ohio and Chattanooga, Tenn. Army Tank Automotive Center (AMC), Warren, Mich.

—**H. Halvorson, Inc.**, Spokane, Wash. $4,220,000. Construction of a composite medical facility at Vandenberg AFB, Calif. District Corps of Engineers, Los Angeles, Calif.

—**Ohio Tool and Mfg. Co., Inc.**, Toledo, Ohio. $1,018,784. Shoe assemblies for various combat vehicles. Toledo. Army Tank Automotive Center (AMC), Warren, Mich.

—**Firestone Tire and Rubber Co.**, Akron, Ohio. $5,246,590. Rubber track shoe assemblies (repair parts for the M60 tank). Noblesville, Ind. Army Tank Automotive Center (AMC), Warren, Mich.

—**Weatherhead Co.**, Cleveland, Ohio. $2,259,776. Projectiles. Cleveland. Ammunition Procurement and Supply Agency (AMC), Joliet, Ill.

29—**M. I. T.**, Cambridge, Mass. $1,275,000. Research covering electronics physics, molecular physics and communication sciences. Cambridge. Electronics Command (AMC), Fort Monmouth, N.J.

—**Bell Helicopter Co.**, Hurst, Tex. $4,603,405. UH1B and UH1D helicopters. Hurst. Aviation Command (AMC), St. Louis, Mo.

—**Western Electric Co.**, New York, N.Y. $2,928,066. Modification of target track radar on Kwajalein Island. NIKE X Project Office (AMC), Huntsville, Ala.

—**Honeywell, Inc.**, St. Petersburg, Fla. $1,000,000. Classified electronics equipment. St. Petersburg. Electronics Command (AMC), Fort Monmouth, N.J.

—**Kaiser Jeep Corp.**, Toledo, Ohio. $1,384,957. 232 trucks with government furnished engines. South Bend, Ind. Army Mobility Command (AMC), Warren, Mich.

—**Tuckman-Barbee Construction Co., Inc.**, Washington, D.C. $1,432,000. Construction of a dispensary and general clinic at Fort Myer, Va. District Corps of Engineers, Norfolk, Va.

—**George A. Rutherford, Inc.**, Albuquerque, N.M. $1,883,800. Construction of technical training building. Sandia Base, N.M. District Corps of Engineers, Albuquerue, N.M.

—**Farrell Construction Co., Inc.**, Memphis, Tenn. $3,909,788. Construction and excavation work on Freshwater
trict Corps of Engineers, New Orleans, La.
Bayou Navigation Project. Near Abbeville, La. Dis-

—**Bauer Dredging Co., Inc.**, Port Lavaca, Tex. $1,145,054. Work on the Sabine-Neches Waterway Project. Near Port Arthur, Tex. District Corps of Engineers, Galveston, Tex.

—**Sylvania Electronics Systems**, Waltham, Mass. $16,252,347. Design, fabrication and installation of new dual frequency designed ALTAIR. Waltham and Roi-Namur Island, Pacific. Army Missile Command (AMC), Huntsville, Ala.

—**U.S. Forgecraft Corp.**, Fort Smith, Ark. $1,588,040. 4.2 inch projectiles. Fort Smith. Ammunition Procurement and Supply Agency (AMC), Joliet, Ill.

—**Chrysler Motor Corp.**, Detroit, Mich. $6,234,778. 2,023 one-ton trucks and 75 one-ton ambulances. Warren, Mich. Army Mobility Command (AMC), Warren, Mich.

—**Bayfield Industries, Inc.**, Carrollton, Tex. $2,478,109. ½-ton utility trucks. Carrollton. Army Tank Automotive Center (AMC), Warren, Mich.

—**Loadcraft Inc.**, Augusta, Kan. $1,013,610. 162 semitrailer vans. Augusta. Army Tank Automotive Center (AMC), Warren, Mich.

—**Johnson Furnace Co.**, Bellevue, Ohio. $1,759,458. 2,996 two-wheel trailer chassis. Bellevue. Army Tank Automotive Center (AMC), Warren, Mich.

—**Fontaine Truck Equipment Co.**, Birmingham, Ala. $2,348,700. 500 semi-trailers. Haleyville, Ala., and Collins, Miss. Army Tank Automotive Center (AMC), Warren, Mich.

—**Chrysler Corp.**, Centerline, Mich. $1,851,422. Engineering services for the M60 series tank; combat engineer vehicle; and armored vehicle launcher bridge. Centerline. Army Tank Automotive Center (AMC), Warren, Mich.

—**Ford Motor Co.**, Wixom, Mich. $6,876,026. 1,552 cargo trucks and chassis. Mahwah, N.J. Army Tank Automotive Center (AMC), Warren, Mich.

—**General Motors Corp.**, Indianapolis, Ind. $4,573,694. 188 transmissions and related spares for the XM551 vehicle. Indianapolis. Army Tank Automotive Center (AMC), Warren, Mich.

—**Consolidated Diesel Electric Corp.**, Stamford, Conn. $8,210,128. Ten-ton trucks. Schenectady, N.Y. Army Tank Automotive Center (AMC), Warren, Mich.

—**General Motors Corp.**, Indianapolis, Ind. $1,671,492. 331 rebuilt/retrofit transmissions for combat vehicles. Indianapolis. Army Tank Automotive Center (AMC), Warren, Mich.

—**Mack Truck Co., Inc.**, Montvale, N.J. $5,349,682. 649 axle sets with related items for the ten-ton truck. Allentown, Pa. Army Tank Automotive Center (AMC), Warren, Mich.

—**Electromagnetic Industries of Georgia**, Moultrie, Ga. $1,444,618. Semi-trailers. Moultrie. Electronics Command (AMC), Philadelphia, Pa.

—**Cummins Engine Co.**, Columbus, Ind. $3,437,898. 691 diesel engines and related items for the ten-ton truck. Columbus. Army Tank Automotive Center (AMC), Warren, Mich.

30—**Remington Arms Co., Inc.**, Bridgeport, Conn. $13,275,385. Miscellaneous ammunition. Independence, Mo. Ammunition Procurement and Supply Agency (AMC), Joliet, Ill.

—**Hughes Aircraft Co.**, Fullerton, Calif. $1,099,993. Fire Distribution Training Set (AN/TSQ–51). Fullerton. Los Angeles Procurement District (AMC), Pasadena, Calif.

—**Hughes Aircraft Co.**, Fullerton, Calif. $1,322,209. Spare parts for the Satellite Communication Terminal

(AN/NSC-46) Mark 1B. Fullerton. Electronics Command, Fort Monmouth, N.J.

—**Allis Chalmers Mfg., Co.**, Milwaukee, Wis. $1,925,000. 65 engine generator sets. Harvey, Ill. Engineer Research and Development Laboratories (AMC), Fort Belvoir, Va.

—**Astrodata Inc.**, Ahaheim, Calif. $3,557,721. Total range requirements for advance range testing reporting and control (ARTRAC). White Sands Missile Range, N.M. White Sands Missile Range (AMC), N.M.

—**Admiral Corp.**, Chicago, Ill. $2,489,839. 983 air-to ground radio communication sets (AN/ARC-54). Chicago. Electronics Command, Fort Monmouth, N.J.

—**Security Construction Co., Inc.**, Richmond, Va. $1,787,000. Construction of a pulse reactor test facility. Aberdeen Proving Grounds, Md. Engineer District, Baltimore, Md.

—**Monsanto Research Corp.**, St. Louis, Mo. $2,000,000. Research program on high performance composites. St. Louis. Defense Supply Service (AMC), Washington, D.C.

—**Western Electric Co.**, New York, N.Y. $1,364,000. Support of Missile Test Firing Program. White Sands Missile Range, N.M. Army Missile Command (AMC), Huntsville, Ala.

—**General Electric Co.**, Syracuse, N.Y. $8,135,430. Mobile acquisition radar (HIPAR). Syracuse. Army Missile Command (AMC), Huntsville, Ala.

—**L&A Construction Co.**, Hattiesburg, Miss. $3,049,925. Construction and excavation work on Yazoo Basin—Yazoo Backwater Project. Vicksburg, Miss. District Corps of Engineers, Vicksburg, Miss.

—**FMC Corp.**, New York, N.Y. $1,996,215. Classified items Newport, Ind. Ammunition Procurement and Supply Agency (AMC), Joliet, Ill.

—**Control Data Corp.**, Minneapolis, Minn. $1,500,000. Classified Electronic equipment. St. Paul, Minn. Electronics Command, Fort Monmouth, N.J.

—**Del Mar Engineering Laboratories, Inc.**, Los Angeles, Calif. $1,974,326. Automated target range. Los Angeles. Los Angeles Procurement District (AMC), Pasadena, Calif.

—**ITT Gilfillan, Inc.**, Los Angeles, Calif. $1,337,210. Radar sets and related components (AN/FPN-36). Azusa, Calif. Los Angeles Procurement District (AMC), Pasadena, Calif.

—**Southwest Truck Body Co., Inc.**, St Louis, Mo. $1,789,000. 75 truck-mounted shop equipment sets for organizational repair. West Plains, Mo. Army Mobility Equipment Center (AMC), St. Louis, Mo.

—**Blount Construction Co.**, Montgomery, Ala. $9,646,108. Construction and excavation work on Columbia Lock and Dam, Ouachita River Project. Columbia, La. District Corps of Engineers, Vicksburg, Miss.

—**S. J. Groves and Sons, Co.**, Minneapolis, Minn. $4,180,351. Excavation and construction work on Eau Galle Dam and Reservoir, Eau Galle River Project. Spring Valley, Wis. District Corps of Engineers, St. Paul, Minn.

—**Martin-Marrietta Corp.**, Denver, Colo. $1,000,000. Research and development services for the establishment of a center for the investigation of high enemy rate forming processes. Denver. Watertown Arsenal (AMC), Watertown, Mass.

—**J. Robert Bazley**, Pottsville, Pa. $2,055,489. Work on La Trobe Flood Protection Project. La Trobe, Pa. District Corps of Engineers, Pittsburgh, Pa.

—**C&C Construction Co.**, Fort Wayne, Ind. $1,011,878. Local protection project. Evansville, Ind. District Corps of Engineers, Louisville, Ky.

—**J. A. Jones Construction**, Charlotte, N.C. $36,884,771. Work on the Cannelton Lock and Dam, Ohio River Project. Cannelton, Ind. District Corps of Engineers, Louisville, Ky.

—**Greer Bros. and Young Co.**, London, Ky. $1,715,747. Work on East Lynn Reservoir, Twelve Pole Creek Project. Lane County, W. Va. District Corps of Engineers, Huntington, W. Va.

—**Westinghouse Electric Co.**, Baltimore, Md. $1,066,563. Three Doppler measurement kits and two digital ranging systems. White Sands Missile Range, N.M., and Baltimore. White Sands Missile Range (AMC), N.M.

—**Hercules Powder Co.**, Wilmington, Del. $1,187,663. Maintenance. Sunflower Army Ammunition Plant, Lawrence, Kan. Ammunition Procurement and Supply Agency (AMC), Joliet, Ill.

—**General Dynamics Corp.**, Pomona, Calif. $1,594,081. REDEYE engineering services. Pomona. Los Angeles Procurement District (AMC), Pasadena, Calif.

—**Ford Motor Co.**, Dearborn, Mich. $12,279,507. ¼-ton utility trucks with government furnished engines. Highland Park, Mich. Army Mobility Command (AMC), Warren, Mich.

—**General United Corp., Inc.**, Topeka, Kan. $1,354,165. Liquid dispensing tank and pump units for truck mounting. Topeka. Army Mobility Equipment Center (AMC), St. Louis, Mo.

—**General Motors Corp.**, Indianapolis, Ind. $4,384,800. 168 transmission center sections for M488 recovery vehicles. Indianapolis. Army Tank Automotive Center (AMC), Warren, Mich.

—**Continental Motors Corp.**, Muskegon, Mich. $2,364,120. M151 utility truck enignes. Muskegon. Army Mobility Command (AMC), Warren, Mich.

—**Continental Motors Corp.**, Muskegon, Mich. $2,830,745. 150 M48A3 tank modification kits (diesel power package). Muskegon. Army Tank Automotive Center (AMC), Warren, Mich.

—**Amron Corp.**, Waukesha, Wis. $1,362,356. 20 mm cartridge cases. Waukesha. Frankford Arsenal (AMC), Philadelphia, Pa.

—**Universal Match Corp.**, St. Louis, Mo. $3,493,116. PERSHING missile erector launches. St. Louis. Army Missile Command (AMC), Huntsville, Ala.

—**Huntington Ordnance, Inc.**, Huntington, W. Va. $1,360,677. Signal kits for 24-volt electrical system trucks. Huntington. Army Tank Automotive Center (AMC), Warren, Mich.

—**RCA**, Burlington, Mass. $1,030,100. Product improvement of maintenance automatic test equipment. Tobyhanna Depot, Pa. and Burlington, Mass. Electronics Command (AMC), Fort Monmouth, N.J.

—**Wexler Construction Co., Inc.**, Newton Highlands, Mass. $2,762,800. Construction of environmental hygiene agency building. Edgewood Arsenal, Md. Engineer District, Baltimore, Md.

—**Allis Chalmers Mfg. Co.**, Milwaukee, Wis. $1,254,874. 38 full-tracked tractors for the Air Force. Springfield, Ill. Army Mobility Equipment Center (AMC), St. Louis, Mo.

—**Mack Trucks, Inc.**, Montvale, N.J. $1,328,077. 10-ton tractor truck (M123A1C) transmission assemblies. Hagerstown, Md. Army Tank Automotive Center (AMC), Warren, Mich.

—**Page Aircraft Maintenance, Inc.**, Lawton, Okla. $2,029,625. Maintenance on fixed and rotary wing aircraft. Cairns Army Airfield, Fort Rucker, Ala. Aberdeen Proving Ground (AMC), Aberdeen, Md.

—**Stamford Research Institute**, Menlo Park, Calif. $2,794,297. Design, collection, reduction and evaluation of data for Combat Development Command Experimental Center. Fort Ord and Hunter Liggett Military Reservation, Calif. San Francisco Procurement District (AMC), Oakland, Calif.

—**Isaacson Iron Works**, Seattle, Wash. $1,352,051. Components for fixed bridge, Line of Communication Highway. Seattle. Army Mobility Equipment Center, St. Louis, Mo.

—**Caterpillar Tractor Co.**, Peoria, Ill. $1,068,288. Airdroppable, full-tracked tractors. Peoria. Army Mobility Equipment Center (AMC), St. Louis, Mo.

—**Oshkosh Motor Truck, Inc.**, Oshkosh, Wis. $1,662,108. 77 truck-mounted snow removal units. Oshkosh. Army Mobility Equipment Center (AMC), St. Louis, Mo.

—**RCA**, Camden, N.J. $1,500,000. Classified electronic equipment. Camden. Electronics Command, Fort Monmouth, N.J.

—**Boeing Co.**, Morton, Pa. $1,438,920. CH-47 aircraft rotor blade transmissions. Morton. Army Aviation Command (AMC), St. Louis, Mo.

—**Boeing Co.**, Morton, Pa. $1,055,043. CH-47 CHINOOK cargo helicopter transmission assemblies. Morton. Army Aviation Command (AMC), St. Louis, Mo.

—**Hanson Machinery Co.**, Tiffin, Ohio. $1,208,952. 2-ton truck mounted cranes with booms. Tiffin. Army Mobility Equipment Center (AMC), St. Louis, Mo.

—**Chamberlain Corp.**, Waterloo, Iowa. $1,609,740. Ordnance items. Waterloo. Ammunition Procurement and Supply Agency (AMC), Joliet, Ill.

—**A. J. Kellos Construction Co.**, Augusta, Ga. $1,244,240. Construction of a 160-man bachelor officer's quarters with utilities. Fort Gordon, Ga. District Corps of Engineers, Savannah, Ga.

—**Mike Bradford Co., Inc.**, Miami, Fla. $1,648,888. Construction of a 50-bed hospital with dental clinic. Moody AFB, Ga. Engineer District, Savannah, Ga.

—**Continental Motors Corp.**, Detroit, Mich. $1,270,355. Overhaul, disassembly and reassembly of 2,259 government furnished engine assemblies for 2½ and 5-ton trucks. St. Thomas, Ont., Canada. Army Tank Automotive Center (AMC), Warren, Mich.

—**AiResearch Mfg. Co.**, Los Angeles, Calif. $3,313,000. 82 gas turbine generator sets. Los Angeles and Phoenix, Ariz. Army Mobility Equipment Center (AMC), St. Louis, Mo.

—**Dynalecton Corp.**, Washington, D.C. $2,996,760. Basic data collection equipment. White Sands Missile Range, N.M.; Holloman AFB, N.M. and Green River Test Complex, Utah. White Sands Missile Range (AMC), New Mexico.

NAVY

1—**Bendix Corp.**, Baltimore, Md. $1,416,114. Navy Aircraft Communication Systems. Baltimore. Bureau of Weapons.

2—**General Dynamics Corp.**, Groton, Conn. $55,594,515. Design and construction of two replenishment fleet oilers. Quincy, Mass. Bureau of Ships.

—**Motorola, Inc.**, Scottsdale, Ariz. $3,179,975. SIDEWINDER missile guidance and control systems. Scottsdale. Bureau of Weapons.

3—**Litton Systems, Inc.**, Beverly Hills, Calif. $2,778,255. E-2A aircraft computer spare parts. Van Nuys, Calif. Navy Aviation Supply Office, Philadelphia Pa.

—**Litton Systems, Inc.**, Beverly Hills, Calif. $5,603,285. Navigation system components for A-6A and E-2A aircraft. Woodland Hills, Calif. Navy Aviation Supply Office, Philadelphia, Pa.

4—**Iannuccilo Construction Co.**, Providence, R.I. $1,422,300. Construction of the operations training building at Fleet Training Center, Newport, R.I. Director, Northeast Division, Bureau of Yards and Docks.

7—**U.S. Steel Corp.**, Pittsburgh, Penn. $9,288,644. 250-pound empty bomb bodies. McKeesport, Penn. Navy Ship Parts Control Center, Mechanicsburg, Pa.

—**American Mfg. Co. of Texas**, Fort Worth, Tex. $7,780,852. 500-pound empty bomb bodies. Fort Worth. Navy Ship Parts Center, Mechanicsburg, Pa.

9—**Western Electric Co.**, New York, N.Y. $2,596,000. Oceanographic research equipment. Hillside, N.J. Navy Purchasing Office, Washington, D.C.

—**Texas Instrument Inc.**, Dallas, Tex. $1,165,115. Spare parts for airborne indicator groups used in the S2E aircraft. Dallas. Navy Aviation Supply Office, Philadelphia, Pa.

—**Vanguard Construction Corp.**, Norfolk, Va. $2,135,397. Installation of a salvage fuel boiler plant at Norfolk Naval Station. Director, Atlantic Div. Bureau of Yards and Docks.

10—**Newport News Shipbuilding and Dry Dock Co.**, Newport News, Va. $73,100,000. Construction of four Attack Cargo Ships (AKA). Newport News. Bureau of Ships.

11—**Bayfield Industries Inc.**, Carrollton, Tex. $1,585,250. SNAKE EYE bomb fins. Carrollton. Naval Ordnance Plant, Louisville, Ky.

—**Humphreys and Harding, Inc.**, Washington, D.C. $3,226,500. Construction of a structural mechanics laboratory at the David W. Taylor Model Basin. Carderock, Md. Director, Chesapeake Div. Bureau of Yards and Docks.

—**North American Aviation, Inc.**, Rocketdyne Div., Canoga Park, Calif. $2,707,029. Long lead time items for rocket motors for SHRIKE and SPARROW missiles. McGregor, Tex. Bureau of Weapons.

—**General Precision Inc.**, Binghampton, N.Y. $1,973,268. One Prototype and four production basic instrument flight trainers. Binghampton. Naval Training Device Center, Port Washington, N.Y.

14—**Douglas Aircraft Co., Inc.**, Long Beach, Calif. $7,481,000. TA-4E aircraft. Long Beach. Bureau of Weapons.

—**Reynolds Metal Co.**, Phoenix, Ariz. $1,054,930. 2.75 rocket components. Phoenix. Navy Ships Parts Control Center, Mechanicsburg, Pa.

—**Muncie Gear Works**, Muncie, Ind. $2,771,400. 2.75 rocket components. Muncie. Navy Ships Parts Control Center, Mechanicsburg, Pa.

—**Huyck Systems Co.**, Huntington Station, N.Y. $1,513,836. Position keeping computers for MK 114 fire control system. Huntington Station. Navy Purchasing Office, Washington, D.C.

—**Goodyear Aerospace Corp.**, Akron, Ohio. $1,240,990. Three radar scope interpretation trainers. Akron. Naval Training Device Center, Port Washington, N.Y.

15—**Westinghouse Electric Corp.**, Pittsburgh, Pa. $6,348,644. Design and furnishing of reactor plant components for nuclear powered ships. Pittsburgh. Bureau of Ships.

16—**Bendix Corp.**, Oxnard, Calif. $2,586,462. Engineering Services, Operational Maintenance of government instrumentation systems and associated range facilities located at down range sites and aboard surface ships of the Western Test Range. Navy Purchasing Office, Los Angeles, Calif.

—**Grumman Aircraft Engineering Corp.**, Bethpage, L.I., N.Y. $1,000,000. Study including examination of possible wider application of F111B missile system. Bethpage. Bureau of Weapons.

—**General Motors Corp.**, Allison Division, Indianapolis, Ind. $1,075,000. Repair kits for T-56 engines. Indianapolis. Navy Aviation Supply Office, Philadelphia, Pa.

18—**C. J. Pankow & Associate**, Pasadena, Calif. $3,691,000. Construction of various facilities at the Marine Corps Base, Camp Pendleton, Calif. Director, Southwest Div. Bureau of Yards and Docks.

21—**Radio Engineering Laboratories, Inc.**, L.I., N.Y. $1,090,660. Components for communications equipment. Long Island City. Bureau of Ships

23—**Raytheon Co.**, Lexington, Mass. $17,521,003. SPARROW III guided missiles and related items. Lowell, Mass. Bureau of Weapons.

—**Pacific Marine Constructors**, Seattle, Wash. $2,660,000. Restoration of a fuel pier and supply wharf. Naval Station Kodiak, Alaska. Director, Northwest Div., Bureau of Yards and Docks.

—**Hughes Aircraft Co.**, Culver City, Calif. $2,769,100. PHOENIX missile system. Culver City. Bureau of Weapons.

—**New Mexico State University**, University Park, N.M. $2,042,299. Services and materials to operate and maintain world-wide missile range doppler tracking systems and instrumentation facilities. Navy Purchasing Office, Los Angeles, Calif.

—**Western Electric Co., Inc.**, New York, N.Y. $1,100,800. Rehabilitation of Pacific Missile Range test communication cable plants at Point Mugu, Calif. and San Nicolas Island, Calif. Director, Southwest Div., Bureau of Yards and Docks.

24—**Polarad Electronics Corp.**, Long Island City, N.Y. $2,513,225. Radio frequency amplifier equipment for Navy ships. Long Island City. Bureau of Ships.

—**General Precision, Inc.**, Clifton, N.J. $1,438,333. Navigation computer sets for Navy aircraft. Clifton. Bureau of Weapons.

—**Collins Radio Co.**, Cedar Rapids, Iowa. $1,629,900. Radio sets for Navy aircraft. Cedar Rapids. Bureau of Weapons.

—**R. F. Communications, Inc.**, Rochester, N.Y. $6,266,539. Radio transmitters and associated equipment for Navy ships. Rochester. Bureau of Ships.

25—**City Electric Inc.**, Seattle, Wash. $2,049,000. Construction of power system improvements at the Naval Station and Naval Communication Station, Adak, Alaska. Director, Northwest Div., Bureau of Yards and Docks.

—**Westinghouse Electric Corp.**, Pittsburgh, Pa. $3,349,670. Components for nuclear powered submarines. Pittsburgh. Bureau of Ships.

—**General Electric Co.**, Washington, D.C. $2,167,960. Reconditioning of 25 Government furnished turbine generator sets. Fitchburg, Mass. Bureau of Ships.

—**Westinghouse Electric Corp.**, Pittsburgh, Pa. $1,500,000. Research and development in nuclear propulsion plants for naval ships. Pittsburgh, Pa. Bureau of Ships.

—**Columbia University**, New York, N.Y. $1,254,000. Research on Project ARTEMIS. Dobbs Ferry, N.Y. Office of Naval Research.

—**Link Group-General Precision Inc.**, Binghampton, N.Y. $8,716,809. F4D and RF4C weapons systems training sets. Binghampton and Palo Alto, Calif. Naval Training Device Center, Port Washington, N.Y.

—**Aeronautics Division, North American Aviation Inc.**, Anaheim, Calif. $3,014,882. Spare parts for navigational systems for the A5A/RA5C aircraft. Anaheim. Navy Aviation Supply Office, Philadelphia, Pa.

—**United Aircraft Corp.**, Norwalk, Conn. $3,263,602. Spare parts for radar sets for the A–6A aircraft, Norwalk. Navy Aviation Supply Office, Philadelphia, Pa.

—**Teletype Corp.**, Skokie, Ill. $1,817,596. Teletypewriters, repair parts and associated equipment. Skokie. Bureau of Ships.

—**Ingalls Shipbuilding Corp.**, Pascagoula, Miss. $24,374,150. Construction of a landing ship dock (LSD). Pascagoula. Bureau of Ships.

28—**International Telephone & Telegraph Corp.**, Nutley, N.J. $2,937,500. Attack Center #3 and retrofits for Attack Centers #1 and 2 at Anti-Submarine Warfare School, Pearl Harbor, Hawaii. Nutley. Naval Training Device Center, Port Washington, N.Y.

—**General Dynamics Corp.**, Groton, Conn. $2,175,000. Modification of the Submarine Training Facility, New London, Conn. Groton. Bureau of Ships.

—**General Electric Co.**, Schenectady, N.Y. $1,869,739. Designing and furnishing of reactor plant equipment for nuclear powered ships. Schenectady. Bureau of Ships.

—**Muncie Gear Co.**, Muncie, Ind. $2,037,750. Nozzle and fin assemblies for the 2.75 inch rocket. Muncie. Navy Ships Parts Control Center, Mechanicsburg, Pa.

—**Western Electric Co.**, New York, N.Y. $1,250,000. Components for hydro-phone assemblies and multiplexers for oceanographic research. Burlington, N.C. Navy Purchasing Office, Washington, D.C.

—**Aerojet General Corp.**, Sacramento, Calif. $6,215,980. Work on the SPARROW-SHRIKE program. Sacramento. Naval Propellant Plant, Indian Head, Md.

—**Amcel Propulsion Co.**, Swannanoa, N.C. $1,953,600. Aircraft flare parachutes. Swannanoa. Navy Ships Parts Control Center, Mechanicsburg, Pa.

—**Radio Corporation of America**, Camden, N.J. $1,235,300. Fabrication, test and experimental models of HF radio sets for Navy aircraft. Camden. Bureau of Weapons.

—**Sparton Corp.**, Jackson, Mich. $1,013,400. Sonobuoys. Jackson. Bureau of Weapons.

—**Hughes Tool Co.**, Culver City, Calif. $7,442,022. 20mm gun pods and related equipment. Culver City. Bureau of Weapons.

—**General Dynamics Corp.**, Pomona, Calif. $2,802,805. Design and development of retrofit changes to improve performance capabilities of TERRIER and TARTAR missiles. Pomona. Bureau of Weapons.

—**International Telephone and Telegraph Corp.**, Nutley, N.J. $1,608,200. Electronic navigation sets. Nutley. Bureau of Ships.

—**Greenhut Construction Co., Inc.**, Pensacola, Fla. $1,544,648. Construction of a composite medical facility addition at Keesler AFB, Miss. Director, Gulf Division, Bureau of Yards and Docks.

—**Westinghouse Electric Corp.**, Pittsburgh, Pa. $3,900,000. Design and furnish reactor plant components for nuclear powered ships. Pittsburgh. Bureau of Ships.

—**Johns Hopkins University, Applied Physics Lab**, Silver Spring, Md. $3,880,200. Research and development on guided missile programs. Silver Spring. Bureau of Weapons.

—**Garrett Corp.**, Los Angeles, Calif. $2,986,100. Ground power units for starting jet engines. Los Angeles. Bureau of Weapons.

29—**M.I.T.**, Cambridge, Mass. $5,208,000. Research on advanced time-sharing computer system. Cambridge. Office of Naval Research.

—**Pennsylvania State University**, University Park, Pa. $1,867,877. Research and development of MK 48 torpedo. University Park. Bureau of Weapons.

—**ITT Gilfillan, Inc.**, Los Angeles, Calif. $1,674,000. Indicator system for AN/SPS–48 Radar Set. Los Angeles. Bureau of Ships.

—**Sperry Rand Corp.**, St. Paul, Minn. $4,435,780. Shipboard automatic data processing systems and associated equipment. St. Paul. Bureau of Ships.

—**General Motors Corp.**, Detroit, Mich. $1,457,480. Shipboard diesel engines. Detroit. Bureau of Ships.

30—**Electronics Specialty Co.**, Los Angeles, Calif. $1,045,518. Pre-detection, receive/record telemetry systems for the Pacific Missile Range. Los Angeles. Navy Purchasing Office, Los Angeles, Calif.

—**Dynatronics Inc.**, Orlando, Fla. $1,426,794. Automatic tracking antennas for the Pacific Missile Range. Orlando. Navy Purchasing Office, Los Angeles, Calif.

—**Astrodata, Inc.**, Anaheim, Calif. $1,100,000. Telemetry separation and display systems for the Pacific Missile Range. Anaheim. Navy Purchasing Office Los Angeles, Calif.

—**Norris Thermador Corp.**, Los Angeles. Calif. $2,184,183. Motor tubes for the 2.75 inch rocket. Los Angeles. Naval Propellant Plant, Indian Head, Md.

—**General Dynamics Corp.**, San Diego, Calif. $1,887,224. Spare parts for A5A/RA5C aircraft bomb director sets. San Diego. Aviation Supply Office, Philadelphia, Pa.

—**Farmers Tool and Supply Co.**, Denver, Colo. $2,893,396. Nozzle and fin assemblies for the 2.75 inch rocket. Denver. Naval Proellant Plant, Indian Head, Md.

—**Mike Bradford Co.**, Miami, Fla. $2,888,322. Composite medical facility at Shaw AFB, S.C. Director, Southeast Div., Bureau of Yards and Docks.

—**Atlantic Research Corp.** Alexandria, Va. $1,923,840. Rocket motors for TERRIER missiles. Gainesville, Va. Bureau of Weapons.

—**Oberg Construction Corp.**, Northridge, Calif. $1,943,810. Construction of barracks at Naval Station, Long Beach, Calif. Director, Southwest Div., Bureau of Yards and Docks.

—**International Business Machines Corp.**, Bethesda, Md. $2,749,000. Computer orientated exploratory development. Honolulu, Hawaii; Norfolk, Va.; Boston, Mass.; Bethesda, Md.; and Washington, D.C. Navy Purchasing Office, Washington, D.C.

—**Westinghouse Electric Corp.**, Baltimore, Md. $20,015,688. Radar sets and related equipment. Baltimore. Bureau of Weapons.

—**H. W. Stanfield Construction Corp., and S. L. Haehn, Inc.**, San Diego, Calif. $2,549,339. Construction of a mess hall at the Naval Training Center, San Diego, Calif. Director, Southwest Div., Bureau of Yards and Docks.

AIR FORCE

1—**General Electric Co.**, Johnson City, N.Y. $2,100,000. Procurement of optical sights for F–4D aircraft weapons systems. Johnson City. Aeronautical Systems Div. (AFSC), Wright-Patterson AFB, Ohio.

—**North American Aviation, Inc.**, Los Angeles, Calif. $17,000,000. XB–70 flight test program. Edwards Air Force Base, Calif. Aeronautical Systems Div. (AFSC), Wright-Patterson AFB, Ohio.

—**North American Aviation, Inc.**, Canoga Park, Calif. $1,042,037. THOR rocket engine propulsion systems. Neosho, Mo., and Canoga Park. Space Systems Div. (AFSC), Los Angeles, Calif.

2—**Chromalloy Corp.**, New York, N.Y. $1,635,350. Repair of J–57 aircraft engines. Hawthorne, Calif. San Antonio Air Materiel Area (AFLC), Kelly AFB, Tex.

—**Lockheed Missiles and Space Co.**, Sunnyvale, Calif.

$10,789,100. Launch services for AGENA–D program. Vandenberg AFB, Calif. Space Systems Div. (AFSC), Los Angeles, Calif.

3—**Philco Corp.** (Western Development Labs), Palo Alto, Calif. $2,500,000. Work on satellite control network. Palo Alto. Space Systems Div. (AFSC), Los Angeles, Calif.

—**General Dynamics Corp., Convair Div.**, San Diego, Calif. $1,233,047. Spare parts in support of ATLAS/AGENA booster program. San Diego. Space Systems Div. (AFSC), Los Angeles, Calif.

4—**Bendix Corp.**, Teterboro, N.J. $2,607,227. Aircraft gyroscopes, amplifiers and related ground equipment for T–38 aircraft. Teterboro. Aeronautical Systems Div. (AFSC), Wright-Patterson AFB, Ohio.

—**Burtek, Inc.**, Tulsa, Okla. $1,190,130. Instrument flight trainers. Tulsa. Aeronautical Systems Div., Wright-Patterson AFB, Ohio.

—**Federal Electric Corp. of International Telephone and Telegraph Corp.**, Paramus, N.J. $1,663,000. Defense Early Warning System improvement work. Paramus. Oklahoma City Air Materiel Area (AFLC), Tinker AFB, Okla.

—**Standard Steel Works, Inc.**, North Kansas City, Mo. $1,293,708. 2,600-gallon tank trucks. North Kansas City. Warner-Robins Air Materiel Area (AFLC), Robins AFB, Ga.

—**Wilcox Electric Co., Inc.**, Kansas City, Mo. $1,530,730. Aircraft communications equipment. Kansas City. Warner Robins Air Materiel Area (AFLC), Robins AFB, Ga.

7—**Oshkosh Motor Truck, Inc.**, Oshkosh, Wis. $1,702,956. Overhaul of snow removal equipment. Oshkosh. Warner-Robins Air Material Area (AFLC), Robins AFB, Ga.

—**Martin Marietta Corp.**, Aerospace Div., Orlando, Fla. $1,018,540. Modification kits for the F–105D aircraft. Orlando. Mobile Air Materiel Area (AFLC), Brookley AFB, Ala.

8—**Emerson Electric Co.**, St. Louis, Mo. $1,367,708. Repair and modification of components of F–89, F–101 and F–102 aircraft fire control systems. St. Louis. Warner-Robins Air Materiel Area (AFLC), Robins AFB, Ga.

9—**Electronic Specialty Co.**, Los Angeles, Calif. $4,053,154. Aerospace ground equipment in support of the ALR–20 airborne receiver used in B–52 aircraft. Los Angles. Aeronautical Systems Div. (AFSC), Wright-Patterson AFB, Ohio.

—**Boeing Co.**, Seattle, Wash. $3,177,367. Missiles and related equipment for the sixth MINUTEMAN wing. Seattle. Ballistic Systems Div. (AFSC), Norton AFB, Calif.

—**Boeing Co.** Seattle, Wash. $1,304,403. Aerospace ground equipment, training equipment and spare parts for MINUTEMAN Wing VI. Seattle. Ballistic Systems Div. (AFSC), Norton AFB, Calif.

—**Aerojet General Corp.**, Liquid Rocket Operations, Sacramento, Calif. $5,101,000. First and second stage engines for the TITAN III–X/AGENA program. Sacramento. Space Systems Div. (AFSC), Los Angeles, Calif.

—**North American Aviation, Inc.**, Los Angeles, Calif. $2,000,000. Production and installation of 335-gallon wing tanks, pylons and related hardware. Los Angeles. Sacramento Air Materiel Area (AFLC), McClellan AFB, Calif.

—**Curtiss-Wright Corp.**, Wood-Ridge, N.J. $1,400,003. Engineering services in support of Navy and Air Force aircraft engines. Wood-Ridge. San Antonio Air Materiel Area (AFLC), Kelly AFB, Tex.

10—**General Electric Co.**, Flight Propulsion Div., Cincinnati, Ohio. $1,100,000. Exploratory development of a high temperature variable area turbine. Cincinnati. Systems Engineering Group, (AFSC), Wright-Patterson AFB, Ohio.

—**Microwave Dynamics Corp.**, Mesa, Ariz. $1,703,118. Engine starter cartridges. Mesa. Aeronautical Systems Div. (AFSC), Wright-Patterson AFB, Ohio.

—**Lockheed Aircraft Corp.**, Marietta, Ga. $1,000,000. Provision services and supplies in support of C–141A performance recorder program. Marietta. Aeronautical Systems Div. (AFSC), Wright-Patterson AFB, Ohio.

—**General Dynamics Corp.**, Fort Worth, Tex. $1,100,000. Manufacture of equipment for a radar system used in B–58 aircraft. Fort Worth. Aeronautical Systems Div. (AFSC), Wright-Patterson AFB, Ohio.

11—**Electronic Specialty Co.**, Los Angeles, Calif. $2,115,256. Spare parts in support of ALR–20 airborne receiver set used in B–52 aircraft. Los Angeles. Warner-Robins Air Materiel Area (AFLC), Robins AFB, Ga.

—**Massachusetts Institute of Technology**, Instrumentation Laboratory, Cambridge, Mass. $1,065,000. Advanced Development of Self-Aligning Boost Re-Entry (SABRE) inertial guidance system. Cambridge. Ballistic Systems Div. (AFSC), Norton AFB, Calif.

—**Lockheed Missiles and Space Co.**, Sunnyvale, Calif. $3,990,015. Production of AGENA boosters. Sunnyvale. Space Systems Div. (AFSC), Los Angeles, Calif.

—**Marquardt Corp.** Van Nuys, Calif. $4,130,000. Work on a classified program. Van Nuys. Aeronautical Systems Div. (AFSC), Wright-Patterson AFB, Ohio.

14—**Bendix Corp.**, Teterboro, N.J. $2,052,636. Computers and amplifiers for F–4 aircraft. Teterboro. Aeronautical Systems Div. (AFSC), Wright-Patterson AFB, Ohio.

15—**Radiation Service Co.**, Melbourne, Fla. $1,626,442. Operation, maintenance and repair of the ballistic missile re-entry data processing system. Holloman AFB, N.M. Air Force Missile Development Center (AFSC), Holloman AFB, N.M.

—**General Motors Corp.**, Indianapolis, Ind. $24,824,992. T–56 aircraft engines. Indianapolis. Aeronautical Systems Div. (AFSC), Wright-Patterson AFB, Ohio.

16—**Avco Corp.**, Stratford, Conn. $4,011,500. Production of T–53 aircraft engines and related material for Army and Air Force aircraft. Statford. Aeronautical Systems Div. (AFSC), Wright-Patterson AFB, Ohio.

—**Western Development Laboratories**, Palo Alto, Calif. $1,600,000. Technical services for satellite control facilities. Palo Alto. Space Systems Div. (AFSC), Los Angeles, Calif.

—**General Electric Co.**, Syracuse, N.Y. $1,817,419. Guidance systems for ATLAS boosted launch vehicles. Syracuse and Utica, N.Y. Space Systems Div. (AFSC), Los Angeles, Calif.

17—**Sargent-Fletcher Co.**, El Monte, Calif. $13,832,000. 370-gallon fuel tank assemblies for F–4C aircraft. El Monte. Ogden Air Materiel Area (AFLC), Hill AFB, Utah.

—**General Electric Co.**, Cincinnati, Ohio. $4,381,444. 450-gallon wing tanks and pylon assemblies for F–105 aircraft. Cincinnati. Aeronautical Systems Div. (AFSC), Wright-Patterson AFB, Ohio.

—**Drexel Dynamics Corp.**, Horsham, Pa. $1,075,602. Production of bomb dispensers, spare parts, and related material. Horsham. San Antonio Air Material Area (AFLC), Kelly AFB, Tex.

—**Boeing Co.**, Seattle, Wash. $1,700,000. Production of missiles and related equipment for the sixth MINUTEMAN wing. Seattle. Ballistic Systems Div. (AFSC), Norton AFB, Calif.

18—**Avco Corp.**, Stratford, Conn. $2,511,671. Production of T55–L–7 shaft turbine engines to support the Army CH–47A aircraft program during FY 65. Stratford. Aeronautical Systems Div. (AFSC), Wright-Patterson AFB, Ohio.

—**General Electric Co.**, Cincinnati, Ohio. $7,130,000. J79–GE–15 turbojet engines for RF–4C aircraft. Cincinnati. Systems Engineering Group (AFSC), Wright-Patterson AFB, Ohio.

—**General Electric Co.**, Cincinnati, Ohio. $1,300,000. Design, investigation and feasibility demonstration of a high stage loading turbine engine compressor and fan. Cincinnati. Systems Engineering Group (AFSC), Wright-Patterson AFB, Ohio.

—**Boeing Co.**, Seattle, Wash. $1,138,800. Assembly and checkout of MINUTEMAN engineering test facility. Hill AFB, Utah. Ballistic Systems Div. (AFSC), Norton AFB, Calif.

—**Comstock and Wescott, Inc.**, Cambridge, Mass. $1,444,085. Design, development, construction and integration of instrumentation for use in satellite and rocket flights to study solar radiation. Cambridge. Electronic Systems Div. (AFSC), L. G. Hanscom Field, Mass.

—**Slick Corp.**, San Francisco, Calif. $6,185,128. International air services. MATS, Scott AFB, Ill.

—**Capital Airways, Inc.**, Nashville, Tenn. $4,326,872. International air services. MATS, Scott AFB, Ill.

—**Northwest Orient Airlines, Inc.**, St. Paul, Minn. $1,014,394. International air services. MATS, Scott AFB, Ill.

—**World Airways, Inc.**, Oakland, Calif. $2,216,781. International and domestic air services. MATS, Scott AFB, Ill.

—**Flying Tiger Line**, Burbank, Calif. $1,112,769. Domestic air services. MATS, Scott AFB, Ill.

—**Zantop Air Transport, Inc.**, Inkster, Mich. $7,367,316. Domestic air services. MATS, Scott AFB, Ill.

21—**Lear Siegler, Inc.**, Grand Rapids, Mich. $1,507,903. Remote attitude flight instruments for aircraft. Grand Rapids. Aeronautical Systems Div. (AFSC), Wright-Patterson AFB, Ohio.

—**Vitro Corp. of America**, Valparaiso, Fla. $8,024,944. Management of operations of land range test areas and the Eglin Gulf Test Range. Valparaiso, Fla. Air Proving Ground Center, Eglin AFB, Fla.

22—**Collins Radio Co.**, Richardson, Tex. $1,077,651. Production of transportable communications systems (AN/TRC–115). Richardson. Oklahoma City Materiel Area (AFLC), Tinker AFB, Okla.

—**Hughes Aircraft Co.**, Culver City, Calif. $3,000,000. Production of adaptor kits for FALCON missiles. Tucson, Ariz. and Culver City. Aeronautical Systems Div. (AFSC), Wright-Patterson AFB, Ohio.

—**General Motors Corp.**, Indianapolis, Ind. $1,829,568. Component improvement program to T–56 engines. Indianapolis. Aeronautical Systems Div. (AFSC), Wright-Patterson AFB, Ohio.

23—**General Dynamics Corp.**, Rochester, N.Y. $1,466,400. Mobile communications equipment. Rochester. Electronics Systems Div. (AFSC), L. G. Hanscom Field, Mass.

—**Kollsman Instrument Corp.**, Elmhurst, N.Y. $5,998,960. Spare parts for mapping and survey systems. Elmhurst. Warner-Robins Air Materiel Area (AFLC), Robins AFB, Ga.

24—**Martin Marietta Corp.**, Baltimore, Md. $2,025,078. Modification and inspection and repair of (IRAN) of B–57 aircraft. Middle River, Md. Warner-Robins Air Materiel Area (AFLC), Robins AFB, Ga.

—**Avco Corp.**, Wilmington, Mass. $2,060,755. Research and development work on a low observable re-entry vehicle. Wilmington. Ballistic Systems Div. (AFSC), Norton AFB, Calif.

25—**American Electric, Inc.**, Paramount, Calif. $1,787,436. Ordnance. Paramount and El Cajon, Calif. Ogden Air Materiel Area (AFLC), Hill AFB, Utah.

—**Collins Radio Co.**, Dallas, Tex. $4,195,000. Production of hard high frequency antenna systems for MINUTEMAN installations. Richardson, Tex. Ballistics Systems Div., Norton AFB, Calif.

—**Thiokol Chemical Corp.**, Brigham City, Utah. $3,195,500. Design, development and firing of a 156-inch solid rocket motor. Promontory, Utah. Space Systems Div., Los Angeles, Calif.

—**United Technology Center**, Sunnyvale, Calif. $10,500,000. Design, development, fabrication delivery and flight testing of large segmented solid propellant motors. Sunnyvale. Space Systems Div., Los Angeles, Calif.

—**Dalmo Victory Co.**, Belmont, Calif. $1,482,734. Production of long range chemical warfare agent detectors. Belmont. Air Proving Ground Center, Eglin AFB, Fla.

—**Cutler-Hammer, Inc.**, Deer Park, L.I., N.Y. $1,703,840. Spare parts for airborne electronic reconnaissance systems. Deer Park. Warner-Robins Air Materiel Area, Robins AFB, Ga.

28—**Cessna Aircraft Co.**, Wichita, Kan. $1,803,764. T–37 series aircraft and related equipment. Wichita. Aeronautical Systems Div. (AFSC), Wright-Patterson AFB, Ohio.

—**North American Aviation, Inc.**, Columbus, Ohio. $3,698,969. Modification of T–28 aircraft. Columbus. Air Materiel Area (AFLC), McClellan AFB, Calif.

—**Hughes Aircraft Co.**, Culver City, Calif. $13,468,725. Modification of AIM (FALCON) series missiles, field checkout equipment and existing spare parts and missile containers. Tucson, Ariz. Middletown Air Materiel Area (AFLC), Olsted AFB, Pa.

—**International Latex Corp.**, Dover, Del. $7,870,825. Production of double-walled, air inflatable shelters. Frederica, Del. 2750th Air Base Wing (AFLC), Wright-Patterson AFB, Ohio.

—**International Telephone and Telegraph Corp.**, Nutley, N.J. $1,693,204. Production of LORAN navigational sets and related equipment for C–141 aircraft. Nutley. Warner-Robins Air Materiel Area (AFLC), Robins AFB, Ga.

29—**Aerojet General Corp.**, Downey, Calif. $5,493,395. Production of clustered, small bomb dispenser units. Downey. Air Proving Ground Center (AFSC), Eglin AFB, Fla.

—**Western Electric Co., Inc.**, New York, N.Y. $2,000,000. Production of TITAN III guidance equipment. Burlington, N.C. Space Systems Div. (AFSC), Los Angeles, Calif.

—**Sargent-Fletcher Co.**, El Monte, Calif. $3,749,000. Ordnance items. El Monte. Ogden Air Materiel Area (AFLC), Hill AFB, Utah.

—**Lockheed Aircraft Corp.**, Sunnyvale, Calif. $2,738,502. Engineering support for AGENA rocket systems. Santa Cruz, Calif. Space Systems Div. (AFSC), Los Angeles, Calif.

—**Armco Steel Corp.**, Middletown, Ohio. $2,306,220. Production of vertical metal retaining walls. Middletown. 2750th Air Base Wing (AFLC), Wright-Patterson AFB, Ohio.

30—**Laboratory for Electronics, Inc.**, Boston, Mass. $1,217,515. Radar test sets in support of F–105 radar equipment. Danvers, Mass. Mobile Air Materiel Area (AFLC), Brookley AFB, Ala.

—**North American Aviation, Inc.**, Los Angeles, Calif. $5,000,000. Continuation of XB–70 flight test program. Edwards AFB, Calif. Aeronautical Systems Div. (AFSC), Wright-Patterson AFB, Ohio.

—**A. J. Industries, Inc.**, El Monte, Calif. $2,084,337. Production of 450 and 650 gallon wing fuel tanks for F–105 aircraft. El Monte. Aeronautical Systems Div. (AFSC), Wright-Patterson AFB, Ohio.

—**Revere Copper and Brass Co., Inc.**, Brooklyn, N.Y. $5,767,000. Classified project. Brooklyn. Aeronautical Systems Div. (AFSC), Wright-Patterson AFB, Ohio.

—**Aerojet-General Corp.**, Sacramento, Calif. $3,006,414. Advanced storable liquid propellant rocket engines. Sacramento. Air Force Flight Test Center (AFSC), Edwards AFB, Calif.

—**Gary Aircraft Corp.**, Victoria, Tex. $2,083,098. Inspection and repair of C–54 aircraft. Victoria. Warner-Robins Air Materiel Area (AFLC), Robins AFB, Ga.

—**Royal Jet Division of Royal Industries, Inc.**, Alhambra, Calif. $1,628,900. Jettisonable fuel tanks for F–104 aircraft. Alhambra. Sacramento Air Materiel Area (AFLC), McClellan AFB, Calif.

—**Lockheed Propulsion Co.**, Redlands, Calif. $5,500,000. Design, development and firing of 156-inch solid rocket motors. Redlands. Space Systems Div. (AFSC). Los Angeles, Calif.

—**Philco Corp.**, Palo Alto, Calif. $1,000,000. Work on a satellite program. Palo Alto. Space Systems Div. (AFSC), Los Angeles, Calif.

—**General Electric Co.**, Cincinnati, Ohio. $8,000,000. Engine components for high performance strategic aircraft. Cincinnati. Aeronautical Systems Div. (AFSC), Wright-Patterson AFB, Ohio.

—**Boeing Co.**, Morton, Pa. $1,260,000. Modification of CH–47 helicopters. Morton. Aeronautical Systems Div. (AFSC), Wright-Patterson AFB, Ohio.

—**Bell Aeroscope Corp.**, Fort Worth, Tex. $3,034,000. Production of UH–1F helicopters and related equipment. Fort Worth. Aeronautical Systems Div. (AFSC), Wright-Patterson AFB, Ohio.

UNIVERSITY OF FLORIDA
3 1262 09683 2935

OFFICE OF THE SECRETARY OF DEFENSE
WASHINGTON, D. C. 20301

OFFICIAL BUSINESS

FLARE

New Airmobile Division Authorized for U.S. Army

Secretary of Defense Robert S. McNamara has authorized the formation of a new airmobile division as part of the Army's 16 division force structure.

Secretary McNamara said the new division will greatly increase the Army's growing capabilities to meet any kind of threat. It places the Army on the threshold of an entirely new approach to the conduct of the land battle. Use of the helicopter to deliver men and weapons on the battlefield will result in greater freedom of movement and exploitation of the element of surprise.

The Secretary also has asked the Chief of Staff, U.S. Army, to recommend to the Joint Chiefs of Staff by January 1, 1966, the specific major airborne and airmobile units to be included within the Army's 16-division structure.

The new division will be organized and trained at Fort Benning, Ga., and will be designated the First Cavalry Division (Airmobile).

Resources now available within the Army will be used to form the division. Personnel and equipment will come from both the Second Infantry Division and the experimental Eleventh Air Assault Division at Fort Benning. The First Cavalry Division, now serving in Korea, will be redesignated the Second Infantry Division.

The First Cavalry Division (Airmobile) will have a strength of 15,787 men and will be equipped with 434 aircraft, most of which will be helicopters. One brigade will be capable of parachute operations. Equipment will include approximately 1,600 ground vehicles.

The greatest contribution of the new division will be to improve combat effectiveness in operations where terrain obstacles and undeveloped communications networks could give enemy guerrilla or light infantry forces an advantage over our standard formations.

Development of the airmobile division is the result of three years of study by the Army, Air Force and U.S. Strike Command. In April 1962, Secretary McNamara asked the Army to take a new look at its tactical mobility, including the greater use of aviation. The basic concept of the new division evolved from the comprehensive program of studies and tests conducted by the Army's Tactical Mobility Requirements Board which was formed in response to the Secretary's request.

Youth Job Program Working Well in DOD

The Department of Defense program to establish additional jobs this summer in support of the President's Youth Opportunity Campaign has passed the half-way mark.

As of June 11, 1965, 5,368 summer jobs for youths 16-21 years old had been filled or committed as part of DOD's summer job campaign.

This represents more than half the 10,000 new jobs that Secretary of Defense Robert S. McNamara ordered established as the DOD implementation of the campaign. Secretary McNamara's order asked that all military and DOD agencies establish new summer jobs at a ratio of about one position for every 100 employees currently on the rolls. There are approximately 1,000,000 employees on the payroll.

President Johnson also asked that industry and private employers establish extra work opportunities for youth this summer. The President has requested that all employers who desire to co-operate in this program contact the nearest State Employment Office.

The new job opportunities for youth made available by DOD activities are in addition to regular summer employment.